EVALUATING THE REGULATORY REVIEW AND APPROVAL PROCESS FOR MAJOR PROJECTS: A CASE STUDY OF THE MACKENZIE GAS PROJECT

by

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ABSTRACT

The proposed Mackenzie Gas Project (MGP) involves extraction and transportation of natural gas and natural gas liquids from the Mackenzie Delta to northwestern Alberta, a distance of approximately 1,200 kilometres. This study evaluates the regulatory review and approval process for the MGP based on a set of 13 best practice principles. The evaluative framework in this report is drawn from best practice literature for environmental assessment developed by a number of Canadian and international authors, and is tailored to examine the regulatory review and approval process for northern projects. Results indicate that two of the best practice principles were fully met, three were largely met, seven were partially met and one was not met.

Strengths of the process include methods used to clarify roles and responsibilities and the framework used to assess cumulative effects. Deficiencies include the lack of transparent decisions.

Keywords: Best practice principles, comprehensive land claim agreements, environmental assessment, Northwest Territories, oil and gas

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LIST OF ACRONYMS

CEAA	Canadian Environmental Assessment Agency
CEA Act	*Canadian Environmental Assessment Act*
COGO Act	*Canada Oil and Gas Operations Act*
DFO	Department of Fisheries and Oceans
DIAND	Department of Indian Affairs and Northern Development
EC	Environment Canada
EIRB	Environmental Impact Review Board
EIS	Environmental Impact Statement
EISC	Environmental Impact Screening Committee
GCLCA	Gwich'in Comprehensive Land Claim Agreement
GLWB	Gwich'in Land and Water Board
GSA	Gwich'in Settlement Area
GTC	Gwich'in Tribal Council
ICGCLCA	Implementation Committee for the Gwich'in Comprehensive Land Claim Agreement
ICSCLCA	Implementation Committee for the Sahtu Comprehensive Land Claim Agreement
IFA	Inuvialuit Final Agreement
IGC	Inuvialuit Game Council
IMA	Interim Measures Agreement

INAC	Indian and Northern Affairs Canada
ISR	Inuvialuit Settlement Region
JRP	Joint Review Panel
RoW	Right-of-Way
MGP	Mackenzie Gas Project
MVEIRB	Mackenzie Valley Environmental Impact Review Board
MAA	Ministry of Aboriginal Affairs
MVRMA	*Mackenzie Valley Resource Management Act*
NEB	National Energy Board
NGF	Niglintgak Gas Field
NWT	Northwest Territories
NWTWB	Northwest Territories Water Board
PIP	Preliminary Information Package
PLGF	Parsons Lake Gas Field
SLWB	Sahtu Land and Water Board
SSA	Sahtu Settlement Area
SSI	Sahtu Secretariat Incorporated
TC	Transport Canada
TGF	Taglu Gas Field
ToR	Terms of Reference

1 INTRODUCTION

1.1 Background

More than 60 significant natural gas fields have been discovered in the Mackenzie Valley, Mackenzie Delta and Beaufort Sea. Technological improvements and increasing prices for oil and natural gas are driving exploration and development of these fields (Canadian Association of Petroleum Producers undated; Sierra Club of Canada undated). The Mackenzie Gas Project (MGP) is one example. The proponents of the MGP are Imperial Oil Resources Ventures Ltd., ConocoPhilips Canada Ltd., ExxonMobil Canada Properties, Shell Canada Ltd., and the Aboriginal Pipeline Group.

The proponents of the MGP plan to extract natural gas and natural gas liquids from three gas fields in the Mackenzie Delta (Joint Review Panel [JRP] 2004). A pipeline will be built to transport these substances to Inuvik, where they will be processed and separated (JRP 2004). Two additional pipelines will be constructed through the Mackenzie Valley: one will transport natural gas liquids from Inuvik to an existing Enbridge pipeline in Norman Wells, and one will transport natural gas from Inuvik to an existing Nova Gas Transmission Line system in Zama, Alberta (JRP 2004). The MGP will be approximately 1,200 kilometres in length and will cross the traditional territory of the Inuvialuit, Gwich'in, Sahtu and Deh Cho Nations (JRP 2004). Figure 1.1. and Figure 1.2 illustrate the location and proposed routing for the MGP.

Figure 1.1 Location

Source: MGP Producer Group undated

Figure 1.2 Routing

Source: MGP Producer Group undated

The MGP was originally proposed in 1974 as the Mackenzie Valley Pipeline. The project was shelved in 1977 after an extensive environmental assessment completed by Justice Thomas Berger identified a number of social and environmental effects that had not been adequately addressed in the project proposal (Berger 1988). Berger recommended that development of the Mackenzie Valley Pipeline be postponed until Aboriginal land claims

were settled, and new programs and institutions that ensured locals would benefit from the pipeline were established (Berger 1988). Berger's assessment is described in further detail in chapter two of this report.

The Inuvialuit, Gwich'in and Sahtu have now signed land claim agreements and the Deh Cho First Nations are in the process of negotiating their land claim agreement with the government of Canada. Land claim agreements are expanded upon in chapter five of this report. Negotiations between the proponents, the government, environmental organizations and affected communities have also led to the creation of a number of innovative programs and agreements that address many of the concerns identified in Berger's assessment. The MGP therefore presents a unique opportunity to evaluate how innovative programs and institutions can improve the development, review and evaluation of large-scale energy projects, especially when Aboriginal communities are affected.

1.2 Purpose and Objectives

The purpose of this report is to evaluate whether the innovative programs and institutions incorporated into the development, review and evaluation of the MGP have succeeded in applying best practice principles for environmental assessment. The goal of this report is to improve the way that large-scale energy projects are developed, reviewed and evaluated in Canada.

Research objectives are to:

1. Identify best practice principles for environmental assessment;
2. Identify and evaluate the programs and institutions involved in the regulatory review and approval process for the MGP to assess the degree to which they meet best practices;

3. Make recommendations for improving the regulatory review and approval process for the MGP based on the best practices evaluation
4. Identify lessons from the MGP case study that can be applied to the regulatory review and approval process for other projects.

1.3 Methodology

In order to fulfill these three objectives, environmental assessment literature will be reviewed and a set of best practice principles and evaluative criteria will be developed.

The review and approval process for the MGP will then be described. Special attention will be paid to programs and institutions that have arisen out of northern land claim agreements and those that have been developed specifically for the MGP. The development, review and evaluation of the MGP will then be evaluated by assessing the degree to which best practices criteria are met.

1.4 Structure

This report is comprised of seven chapters, including this introductory chapter. Chapter two provides a review of critical environmental assessment literature and identifies best practice principles for environmental assessment. Chapter three provides an overview of the MGP, including a description of the project's key components, phases, expenses and employment opportunities. Socio-economic and environmental impacts that are typically associated with pipeline projects and projects that are located in northern Canada are highlighted in chapter four.

Chapter five describes four land claim settlement areas in the NWT and highlights institutional and jurisdictional changes that have altered the review and approval process for the MGP. All of the national, territorial and Aboriginal agencies involved in the review and approval process for the MGP are then identified and their roles described.

Also highlighted are several innovative agreements that have coordinated the Aboriginal, federal and territorial agencies involved in the review and approval process of the MGP.

Chapter six evaluates the development, review and approval process for the MGP based on the best practice criteria identified in chapter two. Innovative aspects of the MGP will be highlighted and evaluated. Chapter seven concludes the report with recommendations for future research and practice.

2 ENVIRONMENTAL ASSESSMENT IN CANADA

2.1 Introduction

Environmental Assessment (EA) is the collective term for a variety of activities and processes that provide decision-makers with information about the potential environmental and socio-economic effects of proposed undertakings (Gibson 2002). In principle, EA leads to the rejection of undertakings that have unacceptable impacts, or ensures that unacceptable impacts are mitigated to the point of acceptability (Wood 1995).

The practice of predicting and mitigating environmental impacts has been conducted throughout history, but up until 1970 most assessments were conducted in an ad hoc manner (Barrow 1997). The origins of modern EA lie in the US National Environmental Policy Act (NEPA) (Wood 1995). NEPA was passed by US Congress in December 1969 and signed into US law in January 1970 (Barrow 1997). NEPA was significant because it proclaimed a US policy for the environment and outlined procedures for achieving that policy, including provisions for EA.

Formalized procedures for EA were subsequently adopted throughout most of the world and are now applied in almost 100 countries (Lawrence 2003). Most EA processes are based on the following series of iterative steps:

- consider alternative means of achieving objectives
- design the selected proposal
- determine whether an EA is necessary
- decide on the topics to be covered in the EA

- prepare the EA report (describe the proposal and the environment affected by it and assess the magnitude and significance of impacts)
- review the EA report to check its adequacy
- make a decision on the proposal
- monitor the impacts of the proposal if implemented (Wood 1995)

EAs were initially focused on biological and physical effects, but have been broadened to include social, cultural, human health, and ecological effects. Indirect and cumulative effects, transboundary impacts and macro-environmental issues are increasingly viewed as important and are beginning to be integrated into EA (Lawrence 2003). There is also increasing recognition of the need for programs which monitor impacts and ensure that operational procedures can be modified in response to emerging issues (Lawrence 2003; Marshall, Arts and Morrison-Saunders 2005).

2.2 Federal EA in Canada

Rising public awareness of environmental damage and the visibility of the NEPA precedent created public pressure for a Canadian EA process (Gibson 2002). In response, the government developed the federal Environmental Assessment and Review Process (EARP) (Gibson 2002). EARP was approved in 1973 and was amended in 1977, but never became enshrined in legislation (Wood 1995). Because EARP was not legislated, governmental adherence to EA requirements was essentially voluntary (Gibson 2002).

In 1984, an EARP *Guidelines Order* clarifying the roles and responsibilities of participants in EARP procedures was developed by the federal government (Wood 1995). The *Guidelines Order* had very little effect on federal authorities' commitment to EA because most departments believed that the *Guidelines Order* was voluntary. Environmentalists disagreed and took the federal government to court in a series of highly publicised lawsuits (Gibson 2002). In 1989, the Federal Court of Canada ruled that the *Guidelines Order* was mandatory. This decision was upheld by the Federal Court of Appeal in 1990 and the Supreme Court of Canada in 1992. The court rulings instigated

more serious attention to EA at the federal level, and in 1990 the federal government began developing a legislated EA process (Gibson 2002).

The *Canadian Environmental Assessment Act* (*CEA Act*) received legislative approval in 1992 but was not proclaimed in force until 1995 (Gibson 2002). The purposes of the *CEA Act* are to ensure that environmental impacts are considered before actions are taken, encourage actions that promote sustainable development, avoid duplication, and provide opportunities for public participation (1992, s. 4). The *CEA Act* was amended in 2003 in order to make EAs more certain, predictable, and timely; to increase their quality; and to provide more meaningful public consultation (Boyd 2003). A more detailed discussion of how the federal EA process is triggered and applied is included in chapter 5.2.2 of this report.

2.3 Northern Environmental Assessment

Canada's Aboriginal policies have been shaped throughout history by *Terra Nullius,* a legal principle that authorizes discoverers of uninhabited land to claim sovereignty, rights and title to said lands. In the 17th century, the concept of *Terra Nullius* was broadened to allow those who discovered Aboriginal territories that were not being used for "civilised" purposes, such as agriculture, industry or commerce, to claim rights and title to said lands (Couch 2002). Aboriginal title to traditional territory was not legally recognized until 1973, when the Supreme Court of Canada ruled in the *Calder* case that Aboriginal title did exist in law, and that where it was not extinguished Aboriginal title to Crown land must still exist (Boyd 2003). The legacy of past relationships between the federal government and Aboriginal people continues to influence Aboriginal issues within Canada (Couch 2002) and is important to consider when discussing EA in northern Canada.

Some of the first Canadian EAs reviewed northern projects such as the proposed Mackenzie Valley Pipeline, Lancaster Sound Drilling Project, Arctic Pilot Project for development of gas fields on Melville Island, and the Norman Wells Pipeline (Mulvihill

and Baker 2001). The review of the Mackenzie Valley Pipeline, still perceived as one of the most influential and effective EAs conducted in Canada, is examined in the following subsection.

2.3.1 The Berger Inquiry

In 1974, a consortium of multinational oil companies known as Arctic Gas submitted a proposal to the Canadian government for a project called the Mackenzie Valley Pipeline. The proponents proposed to extract natural gas from Prudhoe Bay and the Mackenzie Delta, process it and transport it to markets in southern Canada and the United States (Anderson 2003). The dominant perspective in Canadian society at the time was that northern development projects would bring wealth and prosperity to northerners as well as the rest of Canada. Few imagined the Mackenzie Valley Pipeline would not be approved by the federal government (Bone 2003).

The Trudeau government, which was in power when the Mackenzie Valley Pipeline was proposed, commissioned Justice Thomas Berger to head an inquiry into the issues surrounding the Pipeline because Trudeau believed that Berger was respected by Aboriginal people. The federal government believed that if Berger led the inquiry, Aboriginal people would be more likely to abide by his recommendations (Anderson 2003).

Berger was instructed by the government to inquire into and report on the terms and conditions for granting a pipeline right-of-way. The proponents believed Berger's mandate was to determine the terms and conditions that would apply to the construction and operation of the project, whereas opponents believed Berger's mandate was to determine whether or not the project should be approved (Anderson 2003). Berger proceeded with the latter interpretation. Berger also decided to consider the cumulative effects of the pipeline, including impacts from new transportation networks and increased oil and gas activities (Berger 1988).

Berger sought opinions of local Aboriginal people and enabled them to speak to the Inquiry in their own villages, in their own languages, and in their own ways (Berger 1988). This was a departure from previous EAs, which rarely sought opinions of local people (Anderson 2003). Berger took the Inquiry to every city and town, village and settlement in the Mackenzie Valley and the Western Arctic and listened to evidence from over one thousand northerners (Berger 1988). Berger (1988) ran the EA on three assumptions:

1. The industrial system required the gas and oil of the Western Arctic, and the gas and oil would have to be transported along the Mackenzie Valley to markets in the south;
2. The Canadian government intended to protect and preserve Canada's northern environment;
3. The Canadian government intended to honour the legitimate claims and aspirations of Aboriginal people (15).

In April 1977 Berger released his report. He recommended:

1. No pipeline should be built across the northern Yukon because doing so would entail irreparable environmental losses of national and international importance;
2. A pipeline could be built through the Mackenzie Valley, but only after Aboriginal land claims were settled and new programs and institutions which benefited northerners were developed;
3. Building a pipeline before the previous conditions were satisfied would bring limited economic benefits, have devastating social impacts, and would frustrate the goals of Aboriginal land claims;
4. A ten-year moratorium should be placed on construction of any pipeline through the Mackenzie Valley (Berger 1988, 28-29).

The Canadian government endorsed his recommendations.

Berger's Inquiry set an international standard for critical and cross-cultural EA (Gibson 2002). His report also became a Canadian best seller and is credited with changing Canadian society's perception of the north (Bone 2003). The Berger Inquiry was viewed by many as the start of an era which would use EA to balance out the inequities inherent in large-scale resource development projects, ensure accountability, and inject the precautionary principle into decision-making (Wismer 1996). However, critics argue that since the Berger Inquiry northern EA has degraded to become unfair and less comprehensive (Mulvihill and Baker 2001; Wismer 1996).

2.4 Evaluating Regulatory Review and Approval Processes

Best practice principles for EA have been developed by a number of Canadian and international authors. The evaluative framework in this report is based largely on criteria developed by Van Hinte et al. (2007) in order to evaluate the regulatory review and approval processes of pipeline, port and tanker projects. The framework in this report has been tailored to evaluate the regulatory review and approval process for a pipeline project in northern Canada. To this end, best practice principles and evaluative criteria drawn from authors that discuss northern EA, such as Armitage (2000; 2005b); Galbraith (2005); Gibson (1993); Hipwell et al. (2002); Lawrence (2003); Sosa and Keenan (2001); and Wismer (1996), have been incorporated. The framework in this report is comprised of 13 interrelated best practice principles that outline basic administrative requirements and public engagement processes necessary for an effective regulatory review and approval process. The principles and the key reports that support them are summarized in Table 2.1.

Table 2.1 Best Practice Principles

Principle	**Study**			
	Van Hinte, Gunton and Day 2007	**Lawrence 2003**	**IAIA 1999**	**Gibson 1993**
1. Legislated	Management regime formally structured through legislation or regulation	Legislation and regulations result in consistent and acceptable level of practice		Requirements established in law and are specific, mandatory and enforceable
2. Clear Roles and Responsibilities	Roles and responsibilities clearly defined	Responsibilities clearly defined, appropriate, and realistic	Clear and easily understood requirements	Clear and automatic application of requirements
3. Rationale Assessed	Rationale assessed. Comparative evaluation of alternatives completed	Objectives, options and impact management methods systematically identified	Proposed alternatives and their impacts fully considered	Mandated examination of purposes, needs and alternatives
4. Participative	Stakeholders fully engaged in the decision-making process through collaborative decision-making	Conducive to stakeholder understanding and involvement. Public involved in determining approval conditions	Provides opportunities to inform and involve the interested and affected publics	Effective involvement of interested and affected parties as early as possible
5. Equitable Outcomes	Legal obligation to compensate those negatively affected by a project and ensure project benefits are equitably distributed	Facilitates distributional fairness	Results in appropriate level of environmental protection and social well-being	Dedicated to achieving and maintaining local, national and global sustainability
6. Adapted to Context	Legal and fiduciary options, such as to consult and address First Nations interests, are fully met	Designed to match and evolve with context. Accommodates and applies traditional knowledge	Adjusted to realities, issues and circumstances of proposals under review. Traditional knowledge	Different levels of requirements for undertakings of different levels of significance and

			incorporated	controversy
7. *Adequate Information*	Decisions based on adequate and objective information	Thorough treatment of relevant physical, biological, social, cultural and economic effects	Sufficient, reliable and useable information	
8. *Transparent Decisions*	Decision-making process based on clear criteria and methods for assessing options	Explicit and traceable decision-making process	Identifies factors taken into account in decision-making	Decision-making process is open, participative and fair
9. *Efficient*	Decisions reached in a timely manner at a reasonable cost	Efficient and effective use of available resources	Achieves objectives within the limits of available information, time, resources and methodology	Designed to proceed efficiently
10. *Cumulative Effects Assessed*	Impacts assessed in the context of impacts of all other potential projects	Cumulative effects assessed. Conducive to realization of sustainability.	Interrelationships between effects addressed	Integrated evaluation of overall effects carried out
11. *Appeal Process*	Mechanism to allow stakeholders to appeal a decision	An appeal procedure to an independent review body is available		Decision-making is subject to independent review by the courts
12. *Compliance Monitored and Enforced*	Monitoring and enforcement processes, infractions and penalties clearly outlined			Implementation of approval conditions is enforced
13. *Continuous Learning and Adaptive Management*	Monitoring and enforcement based on principles of adaptive management	Data obtained during monitoring are analyzed, documented and used to correct errors and refine management actions	Measures necessary to monitor and investigate residual effects are considered	Effects are monitored

In the following subsections, the principles identified in Table 2.1 are elaborated upon and criteria for evaluation are developed. The subsections are followed by Table 2.2, which provides a summary of the principles and evaluative criteria that will be used to evaluated the regulatory review and approval process for the MGP.

2.4.1 Legislated

The regulatory review and approval process should be legislated in order to ensure a consistent and acceptable level of project assessment (Lawrence 2003). A formally structured review and approval process based in legislation gives decision-makers the authority to carry out their roles, and ensures that timelines, processes, information requirements, and authority are transparent, clear and enforceable (Gibson 1993; OOGRG in Van Hinte 2005; Van Hinte et al. 2007).

2.4.2 Clear Roles and Responsibilities

Roles and responsibilities of agencies involved in the regulatory review and approval process should be clearly identified (Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte et al. 2007). Institutional roles need to be clearly identified through legislation and/or legal agreements in order to provide guidance and outline levels of authority and responsibility (Armitage 2005b; OOGRG in Van Hinte 2005). Formal and informal mechanisms to address jurisdiction overlap should be utilized because such mechanisms help to facilitate collaboration and improve future proceedings (Armitage 2005).

2.4.3 Rationale Assessed

The regulatory review and approval process should require critical examination of the purposes, need and alternatives for a project (Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte et al. 2007). Such requirements are one of the main methods of ensuring that socio-economic and environmental considerations are integrated into the early stages of project planning. An analysis of purposes, needs and alternatives also makes evaluation of proposals much easier (Gibson 1993). For example, a comprehensive comparative evaluation of competing projects can be used to identify which projects achieve the greatest public interest (Van Hinte et al. 2007). Procedures for generating and evaluating

project rationale should be comprehensive, transparent, systematic and explicit (Lawrence 2003).

2.4.4 Participative

The regulatory review and approval process should facilitate effective stakeholder engagement (Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte et al. 2007). Stakeholders need the opportunity to be collaboratively engaged in the decision-making process to ensure that their values, objectives and interests are reflected in project decisions (Frame et al. 2004; Van Hinte et al. 2007). Stakeholder engagement leads to mutual learning and contributes to better analysis of proposals, resulting in superior creative development, more sustainable interventions, and greater public acceptance and support of regulatory decisions than would otherwise occur (Gibson 1993; IAIA 2006; Lawrence 2003).

Regulatory requirements and guidelines that ensure public involvement is sustained throughout the review and approval process help build trust among participants, allow more time for public participation, improve community analysis, improve screening and scoping, and increase opportunities to modify the project proposal as a result of public input (IAIA 2006). Stakeholders are more likely to remain engaged if effective public notification, information exchanges and support programs are in place and participation opportunities are designed to occur at optimal times and locations (IAIA 2006; Lawrence 2003).

Stakeholders should be involved in scoping the issues that will be examined during the regulatory review and approval process, project information should be available in necessary languages and formats, and funding for public involvement should be available and well-advertised (Armitage 2005b; IAIA 2006; Lawrence 2003; Mulvihill and Baker 2001; Wismer 1996). Opinions of unrepresented and underrepresented groups, such as women, children, elderly and poor people, must be actively sought out in order to ensure that all interests are fully incorporated (Hipwell et al. 2002; IAIA 2006; Lawrence 2003; Wismer 1996). A legal framework must be in place to ensure that stakeholders are not

only engaged in the process, but their interests are also incorporated into the outcomes of it (see sections 2.4.5 and 2.4.8).

2.4.5 Distributional Equity Required

The regulatory review and approval process should contain mechanisms which require equitable distribution of project benefits and which ensure that those who are negatively affected by a project are compensated (Lawrence 2003; Van Hinte et al. 2007). Equity is a key component of sustainability (Lawrence 2003). A regulatory review and approval process which requires distributional equity is necessary in order to achieve the levels of environmental protection and social well-being needed to advance goals of social and environmental sustainability (Gibson 1993; Lawrence 2003).

2.4.6 Adapted to Context

The regulatory review and approval process should be adapted to fit within local cultural, social, economic and political dimensions (Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte et al. 2007). A context-oriented approach is more inclusive of affected communities and may improve public confidence in the process and its outcomes (IAIA 2006). For example, an interdisciplinary, multi-method approach that fully incorporates local and Aboriginal values, and which fully incorporates traditional and local knowledge, is more appropriate in northern contexts (Galbraith 2005) and may be more effective at fulfilling legal and fiduciary obligations to Aboriginal people.

2.4.7 Adequate Information

Adequate information should be gathered and analyzed during the regulatory review and approval process (IAIA 1999; Lawrence 2003; Van Hinte et al. 2007). Scientific, technical, traditional and local knowledge gathered by objective parties can help enable thorough treatment of relevant physical, biological, social, cultural and economic issues during the decision-making process (Armitage 2005b; Mulvihill and Baker 2001; OOGRG in Van Hinte 2005; Wismer 1996). Such information is necessary if governments are to make an intelligent assessment of proposed projects (Berger 1988).

2.4.8 Transparent Decisions

The regulatory review and approval process should contain an explicit and traceable decision-making process (Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte et al. 2007). Decisions should be based on clear and well-supported criteria that are developed with public input (Gibson 1993; Lawrence 2003). This increases transparency and greatly facilitates decision-making by providing a clear, coherent, comprehensive, and defensible basis for decision-makers (Gibson 1993; IAIA 1999; Lawrence 2003).

2.4.9 Efficient

The regulatory review and approval process should be efficient (Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte et al. 2007). An efficient process is cost-effective, results in information that assists with problem solving, and creates outputs that can be implemented (IAIA 1999; OOGRG in Van Hinte 2005). Efficiency is more likely to be achieved if issues and impacts that are likely to be important are identified and the process is scoped to concentrate on significant environmental effects and key issues (IAIA 1999).

Efficiency is important because stakeholders can become frustrated if the process becomes characterized by unnecessary uncertainties, inconsistencies and delays. Hostility can increase if valuable work done during project assessment is lost in weak reviews, compromised decision-making or unimplemented conclusions (Gibson 1993). Thus, the regulatory review and approval process should be scoped to achieve accepted requirements and objectives within the limits of available information, time, resources and methodology (IAIA 1999) and should not be constrained by lengthy appeal processes or unnecessary delays caused by blurred roles and responsibilities or absence of a clear decision-making framework (Van Hinte 2005).

2.4.10 Cumulative Effects Assessed

The regulatory review and approval process should assess how impacts of the proposed project combine with those of past, present and future developments (Meredith 2004; Ross 1998; Van Hinte et al. 2007). Cumulative effects assessments are important because

large impacts can arise from the combined, incremental effects of numerous projects whose individual impacts may have been modest (Gibson 1993). Cumulative effects assessments should identify important impacts, identify other human activities that contribute to the same impacts, predict cumulative effects and determine their significance, and suggest appropriate means of managing them (Ross 1998). Cumulative effects assessments must be linked to broader goals and objectives that balance resource development and economic interests with ecological and socio-cultural sustainability (Armitage 2005).

2.4.11 Appeal Process

Stakeholders should be afforded the right to challenge decisions that breach procedural requirements prescribed by guidelines, goals, or objectives. Therefore the regulatory review and approval process should ensure that an appeal procedure to an independent review body exists and is accessible to stakeholders (Gibson 1993; Lawrence 2003; Van Hinte et al. 2007). The appeal process should be efficient and narrowly defined to assess issues related only to legality of process, and not the merits of the decision. A narrowly defined appeal to questions of legality of process is necessary to ensure an appeal body does not substitute its own decision in place of the decision of the environmental assessment process, and is necessary to prevent unnecessary delays to the decision-making process (OOGRG in Van Hinte 2005; Van Hinte et al. 2007).

2.4.12 Compliance Monitored and Enforced

The regulatory framework should clearly outline how compliance in implementing terms and conditions of regulatory approval will be monitored and enforced (Marshall et al. 2005; Sosa and Keenan 2001; OOGRG in Van Hinte 2005; Wismer 1996). Penalties for infractions should be clear (Van Hinte Gunton and Day 2007) and outcomes of compliance monitoring programs should be communicated to the public (Marshall, Arts and Morrison-Saunders 2005; Morrison-Saunders, Baker and Arts 2003). Compliance monitoring can help ensure adherence to terms and conditions of regulatory approval and can help determine where regulatory efforts should be focused in the future (Gibson 1993; Marshall, Arts and Morrison-Saunders 2003).

2.4.13 Continuous Learning and Adaptive Management

Key environmental and socio-economic indicators should be monitored throughout the lifespan of the project to assess progress toward objectives, to detect unanticipated impacts, to identify where uncertainties are reduced and where they remain, and to enhance systems knowledge (Lawrence 2003). Effects of the project need to be monitored to judge the accuracy of impact predictions and to improve predictive science (Gibson 1993; Lawrence 2003). Stakeholders should be involved in design and implementation of effects monitoring programs and the results of such programs should be communicated back to them (Marshall, Arts and Morrison-Saunders 2005; Morrison-Saunders, Baker and Arts 2003). The proponent and/or government should outline how monitoring activities will be funded (Sosa and Keenan 2001).

Information gained from monitoring programs should be incorporated into adaptive management of the project. Adaptive management enables proponents and regulators to continue to address relevant issues and make improvements where necessary (Boyd 2003; Gibson 2006; Lawrence 2003; Marshall et al. 2005; Slinger et al. 2005). Continuous learning and adaptive management are imperative, as ultimately it is not the predicted impacts but the real effects of a project that are important (Marshall, Arts and Morrison-Saunders 2005).

Table 2.2 Evaluative Framework

Principle	**Evaluative Criteria**	**References**
1. Legislated	• Central components of the review and approval process are established in law and are specific, mandatory and enforceable	Gibson 1993; IAIA 1999; Lawrence 2003; OOGRG in Van Hinte 2005; Van Hinte et al. 2007
2. Clear Roles and Responsibilities	• Administrative structures and policy clearly outline levels of authority and responsibility • Jurisdictional overlap is addressed though formal and informal mechanisms	Armitage 2005, 2005b; Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte 2005; Van Hinte et al. 2007
3. Rationale Assessed	• Procedures for generating and evaluating project alternatives are comprehensive, transparent, systematic and explicit	Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte et al. 2007
4. Participative	• Regulatory requirements and guidelines ensure collaborative, sustained and effective public notification, information exchanges and involvement	Armitage 2005b; Gibson 1993; Hipwell et al. 2002; IAIA 1999; Lawrence 2003; Mulvihill and Baker 2001; Van Hinte 2005; Van Hinte et al. 2007; Wismer 1996
5. Distributional Equity Required	• Regulatory review and approval processes contain a legal obligation to provide compensation to those negatively affected by a project and ensure that project benefits are distributed equitably	Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte 2005; Van Hinte et al. 2007
6. Adapted to Context	• Legal and fiduciary obligations to Aboriginal people fulfilled • Traditional and local knowledge fully incorporated	Armitage 2005; Galbraith 2005; Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte et al. 2007
7. Adequate Information	• Adequate scientific, technical, traditional and local information is gathered by objective parties and made available to the public	Armitage 2005b; Berger 1988; IAIA 1999; Lawrence 2003; Mulvihill and Baker 2001; Van Hinte 2005; Van Hinte et al. 2007; Wismer 1996
8. Transparent Decisions	• Explicit and traceable decision-making process based on clear criteria	Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte 2005; Van Hinte et al. 2007
9. Efficient	• Issues and impacts that are likely to be important are identified	Gibson 1993; IAIA 1999; Lawrence 2003; Van Hinte 2005; Van Hinte et al. 2007

	• Process is scoped to achieve accepted requirements and objectives within the limits of available information, time, resources and methodology • Process is not constrained by lengthy appeal processes or unnecessary delays caused by blurred roles and responsibilities or absence of a clear decision-making framework	
10. Cumulative Effects Assessed	• Cumulative effects assessments are completed and linked to broader goals and objectives that balance resource development and economic interests with ecological and socio-cultural sustainability	Armitage 2005; Gibson 1993; IAIA 1999; Lawrence 2003; Meredith 2004; Ross 1998; Van Hinte et al. 2007
11. Appeal Process	• Appeal process is efficient and narrowly defined to eliminate delays to the decision-making process	Gibson 1993; Lawrence 2003; Van Hinte 2005; Van Hinte et al. 2007
12. Compliance Monitored and Enforced	• Regulatory framework clearly outlines how adherence to terms and conditions of regulatory approval will be monitored and enforced • Penalties for non-compliance are clear • Outcomes of compliance monitoring programs are communicated to stakeholders	Gibson 1993; Marshall, Arts and Morrison-Saunders 2005; Morrison-Saunders, Baker and Arts 2003; Sosa and Keenan 2001; OOGRG in Van Hinte 2005; Van Hinte Gunton and Day 2007; Wismer 1996
13. Continuous Learning and Adaptive Management	• Key environmental and socio-economic indicators monitored throughout lifespan of project • Stakeholders involved in design and implementation of effects monitoring programs and informed of outcomes • Information gained from monitoring programs is incorporated into adaptive management of the project • Funding for monitoring programs is outlined	Boyd 2003; Gibson 1993, 2006; Lawrence 2003; Marshall, Arts and Morrison-Saunders 2005; Morrison-Saunders, Baker and Arts 2003; Slinger et al. 2005; Sosa and Keenan 2001; Van Hinte et al. 2007

2.5 Summary

Regulatory review and approval processes identify, analyze and predict potential impacts of proposed projects. Ideally, project benefits are maximized and drawbacks are mitigated to the point of acceptability. In the NWT, the comprehensive land claims process has resulted in a number of innovative institutions and agreements that seek to improve the regulatory review and approval process. There is a need to evaluate the effectiveness of this new process in order to improve theory and practice. The evaluative framework in this report is drawn from best practice literature developed by a number of Canadian and international authors, and is tailored to examine the regulatory review and approval of northern projects.

3 DESCRIPTION OF THE MACKENZIE GAS PROJECT

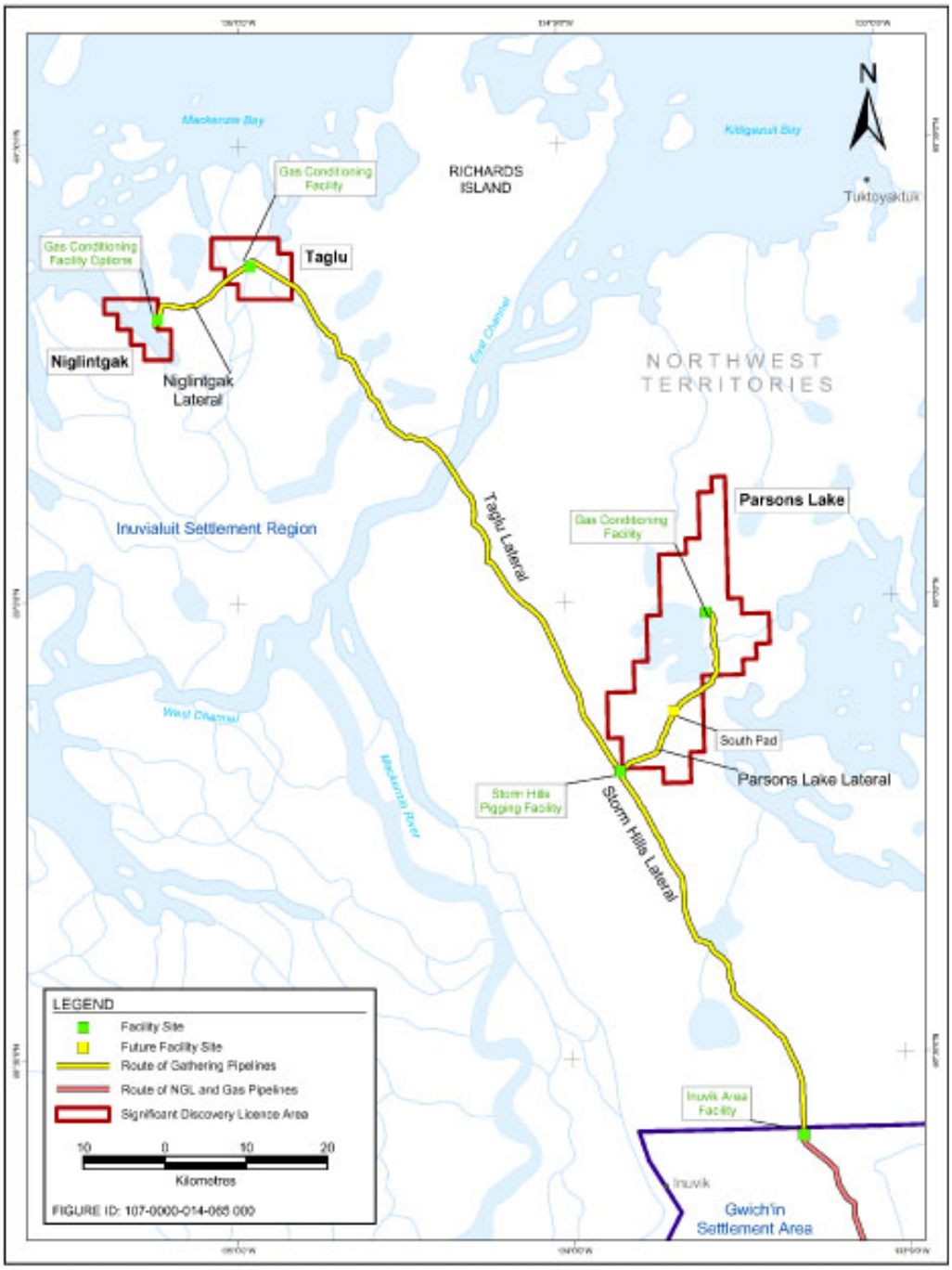
3.1 Introduction

A description of the Mackenzie Gas Project (MGP) provides necessary context for evaluation of the regulatory review and approval process used to assess the project. In this chapter, the MGP is described in terms of its key components, phases and timing, financial costs, and associated employment opportunities.

3.2 Key Components

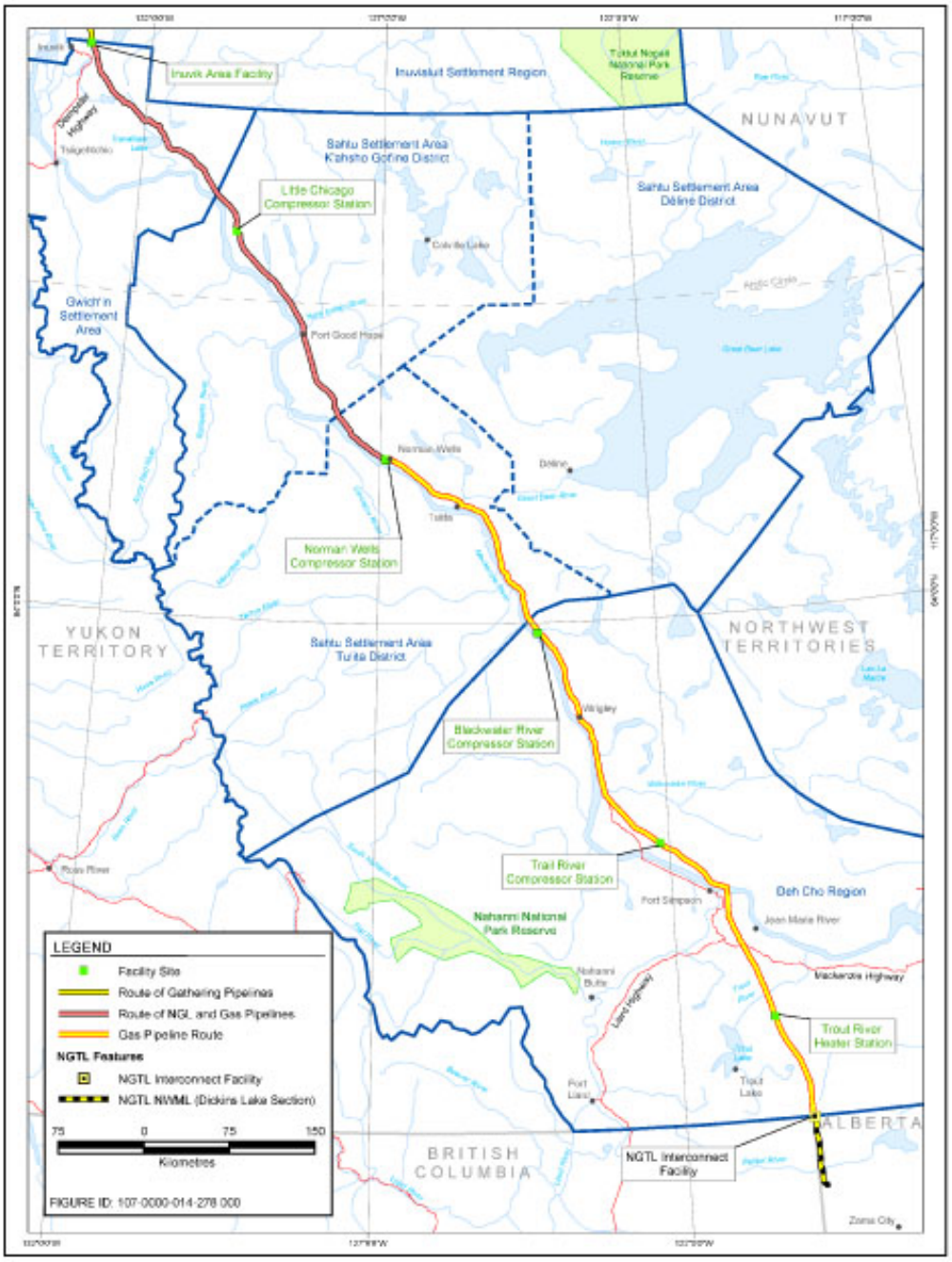
The MGP is comprised of three natural gas production fields, a gathering system, and two transmission pipelines (see Figure 3.1 and Figure 3.2). Each of these key components is described in the following subsections.

Figure 3.1 Production Fields and Gathering System



Source: EIS 2004, v. 1, 2.15

Figure 3.2 Transportation Pipeline



Source: EIS 2004, v.1, 2.16

3.2.1 Natural Gas Production Fields

The three production fields contain a total of 164 billion cubic meters (Gm^3) of natural gas (PIP 2003). Table 3.1 provides an overview of each of the natural gas production fields and is followed by a more detailed description of the location and extraction plans for each field.

Table 3.1 Natural Gas Production Fields

Gas Field	Size (Gm^3)	Holder	Operator
Taglu	85	Imperial Oil Resources Ventures	Imperial Oil Resources Ventures
Parsons Lake	51	ConocoPhillips (75%) ExxonMobil (25%)	ConocoPhillips
Niglintgak	28	Shell Canada	Shell Canada

Source: Preliminary Information Package (PIP) 2003

3.2.1.1 Taglu Gas Field

Imperial Oil discovered the Taglu Gas Field (TGF) in 1971. Imperial Oil is the sole holder and operator of the TGF (MGP Producer Group undated). The TGF is located about 120 kilometres northwest of Inuvik and about 70 kilometres west of Tuktoyaktuk. A large part of the TGF is located within the Kendall Island Bird Sanctuary.

The Taglu gas reservoir lies approximately three kilometres below ground. The proponents plan to drill between 10 and 15 production wells from one central pad. Subject to regulatory approval, site and facilities development will begin at TGF in the summer of 2010. Initial well drilling will begin in the fall of 2012 and gas production will commence in the fall of 2013 (Imperial Oil Resources Ventures 2007).

3.2.1.2 Parsons Lake Gas Field

The Parsons Lake Gas Field (PLGF) was discovered in 1972 (PIP 2003). The field is held by ConocoPhilips and ExxonMobil and will be operated by ConocoPhilips (MGP Producer Group undated). PLGF is approximately 70 kilometres north of Inuvik and 55

kilometres southwest of Tuktoyaktuk. Like the TGF, the gas reservoir at Parsons Lake lies approximately three kilometres below the surface.

PLGF contains two development areas: the North Pad and the South Pad. Both pads will be constructed on old gas well sites that were used in the 1970s (PIP 2003). Approximately nine to 19 production wells will be drilled from the north pad and approximately three to seven production wells will be drilled from the south pad (EIS v. 2 2004). Subject to regulatory approval, site and facilities development will begin in the winter of 2011. Initial well drilling will begin in the fall of 2012 and gas production will commence in the winter of 2014 (Imperial Oil Resources Ventures 2007).

3.2.1.3 Niglintgak Gas Field

The Niglintgak Gas Field (NGF) was discovered in 1973 (PIP 2003). Shell Canada is the sole holder and operator of the NGF. The NGF is located about 120 kilometres northwest of Inuvik and about 85 kilometres west of Tuktoyaktuk and is within the Kendall Island Bird Sanctuary (PIP 2003). The reservoir is shallow, pocketed and lies approximately one kilometre below the surface. The proponents plan to construct three well pads that will contain a total of approximately six production wells (MGP Producer Group undated). Subject to regulatory approval, site and facilities construction will begin in the summer of 2010. Initial well drilling will begin in the fall of 2010 and gas production will commence in the fall of 2013 (Imperial Oil Resources Ventures 2007).

3.2.2 Gathering System

The gathering system contains four sections of pipeline that will move natural gas and natural gas liquids from the gas production fields to the end of the gathering system, a pigging facility, and a gas and liquid separation facility. Subject to regulatory approval, site and facilities development will begin in the spring of 2010. Right-of-way (RoW) site preparation and pipeline construction will begin in the fall of 2010 and start-up will occur in the fall of 2013 (Imperial Oil Resources Ventures 2007).

3.2.2.1 Gathering Pipelines

The pipelines for the gathering system will be buried approximately three feet below the ground in most places, with the possible exception of the section from Niglintgak to Taglu. If the pipeline is not buried, it will be raised approximately five to six feet above the ground in order to allow for passage of wildlife and snowmobiles (MGP Producer Group undated). Pipeline diameters range from 16 to 30 inches, and sections range from 15 to 82 kilometres in length. Configurations of the gathering pipelines are provided in Table 3.2.

Table 3.2 Gathering Pipeline Configurations

Route	Length (km)	Diameter (inches)	RoW (meters)
Niglintgak to Taglu	15	16	30
Taglu to Storm Hills	82	26	40
Parsons Lake to Storm Hills	28	18	30
Storm Hills to Inuvik Area	51	30	40

Source: Environmental Impact Statement (EIS) 2004

3.2.2.2 Storm Hills Pigging Facility

Pigs are devices that are placed into pipelines to clean and monitor the conditions of the inside of the pipes (MGP Producer Group undated). Pigs are inserted into or removed from pipelines at pigging facilities.

The Storm Hills Pigging Facility, located approximately 50 kilometres north of Inuvik, is part of the gathering system for the MGP. The facility will be equipped with an office, workshops, a small permanent camp, power generators, storage areas and a helipad (MGP Producer Group undated). The site will occupy approximately 4 ha (EIS 2004).

The Storm Hills pigging facility will be capable of remotely receiving pigs from the Taglu, Parsons Lake and Niglintgak gas fields and remotely sending pigs to the Inuvik Area Facility (EIS 2004). The Storm Hills Pigging Facility will only be staffed during periods of manual pigging and routing service or repair (EIS 2004).

3.2.2.3 Inuvik Area Facility

Natural gas liquids, which consist of varying proportions of butane, propane, and pentane with little or no methane or ethane, can be separated out from natural gas through temperature and pressure changes (MGP Producer Group undated). The Inuvik Area Facility, located approximately 20 kilometres east of Inuvik, is where natural gas and natural gas liquids will be processed and separated into different pipelines. The facility will be staffed with operations and maintenance personnel and includes maintenance, administration and control room facilities (EIS 2004). The site will occupy approximately 48 ha and will be accessible by helicopter and by an all-weather road that extends 19 kilometres north from the Dempster Highway (EIS 2004).

3.2.3 Transportation Pipelines

Natural gas and natural gas liquids will be transported through two different pipelines after separation at the Inuvik Area Facility. The natural gas pipeline will be significantly longer than the natural gas liquids pipeline because a natural gas liquids pipeline already extends from Norman Wells to northwestern Alberta (EIS 2004). Subject to regulatory approval, site and facilities development will begin in the spring of 2010. RoW site preparation and pipeline construction will begin in the fall of 2010 and start-up will occur in the fall of 2013 (Imperial Oil Resources Ventures 2007). Details of each of the transportation pipelines are provided in the following subsections

3.2.3.1 Natural Gas Liquids Pipeline

The natural gas liquids pipeline will be 476 kilometres in length and will transport natural gas liquids from the Inuvik Area Facility to Norman Wells, where it will join with an existing Enbridge pipeline (EIS 2004). The Enbridge pipeline has been operational since 1985 and extends from Norman Wells to Zama, Alberta (Enbridge, 2005).

The natural gas liquids pipeline will have a diameter of 10 inches and will have an initial capacity of 3,300 m^3 per day. The natural gas liquids pipeline will be buried except for some sections that cross water or steep slopes (EIS 2004). The natural gas liquids pipeline will share a 50 meter RoW with the gas pipeline for approximately 475

kilometres but will diverge from the gas pipeline one kilometre upstream of the interconnection with the Enbridge pipeline in Norman Wells (EIS 2004).

3.2.3.2 Natural Gas Pipeline

The natural gas pipeline will originate at the Inuvik Area Facility and continue south along the eastern side of the Mackenzie Valley until it joins with the existing Nova Gas Transmission Line system in Zama, Alberta (EIS 2004). Total length of the natural gas pipeline is 1,200 kilometres, most of which will be buried (EIS 2004). In areas where the pipeline is not buried, it will be raised approximately five to six feet above the ground in order to allow for passage of wildlife and snowmobiles (MGP Producer Group undated).

The natural gas pipeline will have a 30-inch diameter and a capacity of approximately 34 million cubic meters (Mm^3) per day. The natural gas pipeline will share a 50 meter RoW with the natural gas liquids pipeline between Inuvik and the Norman Wells compression facility. The RoW between the Norman Wells compression facility and the Nova Gas Transmission Line system in Alberta will be 40 meters (EIS 2004). Configurations of the natural gas pipeline and natural gas liquids pipeline are shown in Table 3.3.

Table 3.3 Transportation Pipeline Configurations

Route	Length (km)	Diameter (inches)	RoW (meters)
Inuvik Area to Norman Wells (natural gas liquids)	476	10	50 (shared with gas pipeline)
Inuvik Area to NGTL System (natural gas pipeline)	1200	30	50 (first 475 km) 40 (next 725 km)

Source: EIS 2004

3.3 Project Phases and Timing

Development of the MGP can be divided into four phases: assessment of feasibility; regulatory review and approval; construction; and operation. A summary of the components and time frame for each of the four phases is provided in Table 3.4. The MGP is currently in phase two, the regulatory review and approval phase.

Table 3.4 Project Phases and Timing

Phase	Timing	Components
Feasibility Study	2000-2001 (completed)	Assessment of external matters Assessment of natural gas markets Assessment of reserves
Regulatory Review and Approval	2002- ongoing (current stage)	Engineering studies Environmental field work Public consultation Northern benefits plan Regulatory applications Regulatory review process
Construction	3 to 4 years (future stage)	Detailed design of facilities Construct drill wells Purchase goods and services Construct pipeline and facilities
Operation	25 + years (future stage)	Gas sales Potential expansion Abandonment and reclamation

Source: EIS 2004

The feasibility assessment was conducted by the proponents between 2000 and 2001. The assessment evaluated the feasibility of commercially developing the natural gas production fields and transporting the natural gas to market by pipeline (EIS 2004). The feasibility study included an assessment of natural gas markets, reserves and external matters. The final report concluded that the project was financially feasible, and should proceed to the next phase.

The proponents announced plans to proceed to the regulatory review and approval phase in January 2002. Applications for regulatory approval, including socio-economic and environmental impact statements and plans for environmental protection and monitoring were submitted in October 2004 (EIS 2004). Regulatory review has not been completed as of June 2007. If the project receives approval, the proponents will reassess the feasibility of the project and make a decision whether or not to proceed to the construction phase (EIS 2004).

The proponents anticipate that construction will take up to four years and will mostly occur during the winter seasons. Construction will be followed by a 25-year operations phase. During the operations phase additional gas fields may be developed, in which case

the life of the MGP will be extended. Abandonment and reclamation activities are considered part of the operations phase (EIS 2004).

3.4 Expenses

3.4.1 Capital Costs

Total capital costs, including engineering design, procurement, owners' costs, and construction of all initial project components will be approximately 16 billion dollars (Imperial Oil Resources Ventures 2007). Approximately 4.9 billion dollars will be spent on the three natural gas fields and approximately 11.3 billion dollars will be spent on pipelines and facilities (EIS 2004). See Table 3.5 for a breakdown of the capital costs for each of the key components of the MGP.

Table 3.5 Capital Costs

Component	Capital Costs (Millions of Dollars Cdn)
Natural Gas Fields	
Taglu	2,550
Parsons Lake	1,550
Niglintgak	800
Pipelines and Facilities	
Gathering system	3,500
Transportation pipelines	7,800
Total Initial Capital Costs	**16,200**

Source: Imperial Oil Resources Ventures 2007

Although the majority of project components will be located within the NWT, 85% of capital expenditures will be completed outside of the NWT (EIS 2004). This level of economic leakage is due to the underdeveloped industrial base and limited labour force within the NWT. Typically, the NWT relies heavily on imports from the southern Canadian provinces. It is estimated that 50% of expenditures will be completed in Alberta; 20% will be completed elsewhere in Canada; and 15% will be completed in foreign countries (EIS 2004). Additionally, capital expenditures completed within the NWT, such as tools and building supplies, may be for goods that are produced outside of the NWT, further increasing economic leakage (EIS 2004).

3.4.2 Operation Costs

Total operations and maintenance costs are expected to be approximately 150 million dollars per year (EIS 2004). The costs that will be incurred from abandonment and reclamation activities are not reflected in annual average costs because plans for abandonment and reclamation have not been finalized. The breakdown of operation and maintenance costs is outlined in Table 3.6.

Table 3.6 Average Annual Operation and Maintenance Costs

Component	Annual Cost (Millions of Dollars)
Taglu	18
Parsons Lake	9
Niglintgak	10
Gathering system	50
Gas pipeline and facilities	62
Total	**149**

Source: EIS 2004

3.5 Employment

The majority of employment associated the MGP will be generated during the four-year construction phase. A total of 659 person-years of direct employment will be generated during construction of the natural gas production fields (EIS 2004). The anticipated amount and type of employment associated with the construction of the natural gas fields is provided in Table 3.7.

Table 3.7 Natural Gas Fields Construction Employment between 2006 and 2010

Position	Person Years of Employment		
	Taglu	Parsons Lake	Niglintgak
Supervisors	35	33	26
Welders	37	37	38
Teamsters	54	24	6
Operators	32	34	18
Labourers	7	7	37
Others	57	57	21
Inspectors	12	12	6
Camp and catering personnel	21	20	13

Camp infrastructure personnel	0	0	1
Camp logistics personnel	0	0	14
Total person-years	**255**	**224**	**180**

Source: EIS 2004

A total of 17,926 person-years of direct employment will be generated during construction of the pipelines and facilities (EIS 2004). The anticipated number and type of employment for each year on construction is provided in Table 3.8.

Table 3.8 Pipelines and Facilities Construction Employment

	Year (July-June)			
Position	**2006-2007**	**2007-2008**	**2008-2009**	**2009-2010**
Supervisors	180	516	437	38
Welders	8	1,456	1,256	0
Teamsters	434	1,267	1,024	6
Operators	437	2,244	1,800	3
Labourers	4,14	2,064	1,570	4
Others	4	150	297	0
Inspectors	38	133	132	10
Construction reclamation and demobilization personnel	0	0	0	38
Camp and catering personnel	54	632	543	58
Camp infrastructure personnel	52	83	67	10
Camp logistics personnel	45	64	40	8
Total person-years	**1,666**	**8,609**	**7,166**	**485**

Source: EIS 2004

Additional personnel will be required for the ongoing operation of the natural gas production fields, pipelines and facilities. Total employment required for the operation of the production fields will be 55 personnel (EIS 2004). Total employment required for the operation of the pipelines and facilities will be 98 personnel (EIS 2004).

3.6 Summary

The MGP would extend from the Mackenzie Delta to Zama, Alberta, approximately 1,200 kilometres to the south. Key components of the project include three natural gas fields, a gathering system, a natural gas liquids pipeline and a natural gas pipeline.

The MGP is expected to cost approximately 16 billion dollars to build (Imperial Oil Resources Ventures 2007) and approximately 150 million dollars per year to operate (EIS 2004). The majority of construction and operation costs will be allocated to facilities and pipelines rather than the three natural gas fields. Most of the employment arising from the MGP will be generated during the construction phase of the project. Only a small percentage of total project expenditures will remain within the NWT.

4 POTENTIAL IMPACTS

4.1 Introduction

Oil and gas projects can cause a variety of short-term and long-term environmental and socio-economic impacts. These impacts can be positive or negative and their magnitude can vary. The environmental and socio-economic impacts that may arise from the MGP are briefly summarized in this chapter.

This chapter begins with a description of potential impacts on air quality, noise levels, soils, hydrology, fish, vegetation and wildlife. Potential impacts arising from oil spills and from changes to protected areas are also discussed (see Table 4.1 for a summary of these impacts).

Potential socio-economic impacts are then highlighted. Anticipated changes to regional economies, government revenues, demography, transportation, energy utilities infrastructure, housing, recreation resources, community well-being, health and health care services, public safety and protection services, education, traditional culture, other economic sectors and heritage resources are examined (see Table 4.2 for a summary of these impacts).

4.2 Environmental Impacts

4.2.1 Air Quality

Pipeline construction and operation activities may have a negative impact on air quality. During the construction phase, air quality can be affected by vehicle emissions; burning of slash and debris to clear the pipeline right-of-way; and generation of dust from disturbed areas, vehicle traffic, and construction camps (EIS v.1 2004; Van Hinte et al. 2007). During operations, air quality can be reduced by emissions from wells, natural gas

flares, compressor stations, heater facilities and maintenance vehicles (EIS v.1 2004; O'Rourke and Connolly 2003; Van Hinte et al. 2007).

The proponents plan to minimize negative air quality impacts by using equipment that meets relevant federal and territorial standards for emissions, ensuring flare stack design and performance are consistent with applicable regulations, reducing fuel use, and reducing vehicle idling times (EIS v.1 2004, 23).

4.2.2 Noise Level

Noise level can be raised by construction activities, transportation of materials, operation of compressor stations, and routine maintenance flyovers (EIS v. 1 2004; Van Hinte 2005). Noise generated by such activities can have a negative impact on wildlife migration patterns, and disturb local residents, hunters and recreational users (Epstein and Selber 2002; Van Hinte 2005; Van Hinte et al. 2007).

The proponents plan to reduce negative noise impacts by implementing noise controls such as silencers, insulation, and upgraded building shells. Discretionary activities will be scheduled to avoid the times when wildlife are most sensitive to noise impacts (EIS v. 1, 23).

4.2.3 Soils and Permafrost

Permafrost presents a significant challenge for the design, construction and operation of northern pipelines. The right-of-way for the MGP passes through continuous, discontinuous, and sporadic permafrost (Bone 2003b). Site disturbance during pipeline construction or changes in thermal regime can initiate freeze and thaw cycles that may lead to frost heave or ground settlement along the pipeline and at facility locations (EIS v. 1 2004). For example, freeze and thaw cycles initiated by the Norman Wells oil pipeline, which extends from Norman Wells, NWT, to Zama, Alberta, have resulted in frost heave of up to one metre (Bone 2003b). Construction and operation activities erode, compact, pulverize, rut, and remove soils, which reduces soil capability and leads to terrain instability (Bone 2003b; EIS v. 1 2004; Van Hinte et al. 2007).

The proponents plan to mitigate negative impacts to soils and permafrost by minimizing the route length of the pipeline and reducing facility footprints (EIS v. 1 2004, 27). Grading and levelling will also be minimized, and slopes and banks will be reclaimed and stabilized after construction. Additionally, effects of thaw settlement and frost heave, slope erosion, slope movement and drainage conditions will be monitored at select sites (EIS v. 1 2004, 27).

4.2.4 Hydrology

Pipeline construction and operation activities can have numerous impacts on hydrology. Changes to recharge and discharge patterns can result from site disturbance, removal of granular material at borrow sites, withdrawal of water, obstruction of flow, alteration of permafrost patterns, or subsidence related to gas extraction (EIS v. 1 2004; Van Hinte et al. 2007).

Water quality can be degraded by increased sediment inputs arising from land disturbance, dredging activities and construction of watercourse crossings, pollution from barge traffic and chemical leaks and spills (EIS v.1 2004; Van Hinte 2005). During drilling activities, a significant amount of water, known as “produced water”, is used and is contaminated by drilling fluids and by-products. Produced water is typically four times saltier than ocean water, and may also contain large quantities of toxins such as benzene, xylene, toluene and ethylbenzene, as well as heavy metals such as barium, arsenic, cadmium, chromium and mercury. If produced water is discharged directly into the environment, chemical contamination of water can arise (O’Rourke and Connolly 2003).

The proponents plan to minimize negative impacts on surface water by disposing of wastewater and drilling waste through deep-well injection, remote sump, or off-site transportation; and reclaiming the bed, banks and approach slopes of watercourses to stable conditions, grade and contours. They also plan to record water withdrawals and ensure water use permits are adhered to, test water releases and monitor water bodies affected by domestic wastewater release (EIS v. 1 2004, 25). Minimum setbacks from watercourses will be enforced; structures will be designed to withstand thaw settlement;

and in certain areas runoff will be directed through silt fences, sediment traps, vegetation, and berms before being released into the watershed. Programs to monitor drainage conditions, sediment control devices, streambed conditions and bank stability at watercourse crossings will be implemented (EIS v. 1, 24-25).

The proponents plan to mitigate groundwater impacts by installing drainage controls in areas of substantive groundwater flow, monitoring visual changes in locations or extent of groundwater discharge areas, and monitoring environmental effects of frost bulb formation along the pipeline corridor (EIS v. 1 2004, 24).

4.2.5 Fish

Increased sediment loads in watercourses, trenching and dredging activities, or changes to water flows or turbidity can negatively affect fish habitat, health and abundance. Formation of frost bulbs around pipelines, noise disturbances, and increased access to fishing areas can also have a negative impact (EIS v. 1 2004; Epstein and Selber 2002; Van Hinte et al. 2007).

The mitigation strategies for hydrology impacts should address many of the potential causes of negative impacts on fish populations. In addition, the proponents plan to conduct most construction activities in the winter; avoid spawning, rearing and overwintering fish habitats unless authorized; prohibit fishing by construction personnel while on the jobsite; and monitor subsistence and recreational fishing at selected water bodies (EIS v. 1 2004, 26).

4.2.6 Vegetation

Vegetation distribution, health and abundance may be negatively affected by air, soil and hydrology impacts (EIS v. 1 2004). Impacts may also arise from the introduction of non-native or invasive plants and disturbance of rare plants (EIS v. 1 2004; Van Hinte et al. 2007).

The proponents plan to minimize potential impacts to vegetation through the air, soil and hydrology mitigation strategies explained in sections 4.2.1, 4.2.3 and 4.2.4 (EIS v. 1 2004, 27). The proponents also plan to control weeds to prevent invasive species, and to monitor vegetation composition, cover, health and vigour at selected sites (EIS v. 1 2004, 27).

4.2.7 Wildlife

All of the air, noise, soil, hydrology, fish, and vegetation impacts described thus far have potential to affect wildlife distribution, health and abundance. In addition, wildlife may be negatively impacted by direct habitat loss related to construction activities; sensory disturbances that affect feeding, nesting, denning or breeding patterns; or physical barriers that affect seasonal or daily movement (EIS v. 1 2004; Van Hinte et al. 2007). An increase in human-wildlife conflicts may lead to an increase in the destruction of wildlife (EIS v. 1 2004). Additionally, roads and pipeline right-of-ways may increase human and predator access and result in increased wildlife mortality (EIS v. 1 2004; Van Hinte et al. 2007).

The mitigation strategies for air, noise, hydrology, fish, soil, and vegetation impacts outlined in sections 4.2.1 to 4.2.5 will help to minimize many of the potential negative impacts on wildlife (EIS v. 1 2004). The proponents also plan to develop and implement guidelines to reduce sensory disturbance, manage human access in cooperation with communities and regulatory agencies and control vehicle use on the pipeline corridor. The proponents plan to prevent the harvest, harassment and feeding of wildlife on job sites, schedule work activities to avoid sensitive life-cycle stages for wildlife, reduce barrier effects of the pipeline on wildlife movement, and manage waste to prevent wildlife attraction and thereby reduce human-wildlife conflicts (EIS v. 1 2004, 28).

4.2.8 Protected Areas

The MGP will pass near or within several areas that are protected or given special status through legislation or other means (EIS v. 6 2004, 7-4). These areas include Inuvialuit community conservation plan category areas, Gwich’in and Sahtu conservation zones and

special management areas, territorial parks, proposed and existing protected areas, international biological program sites, national historic sites, caribou areas, recreation areas, and the Kendall Island bird sanctuary (EIS v. 6 2004, 7-4; PIP 2003). The proponents plan to mitigate negative impacts by following the recommendations or requirements of all applicable land use plans and regulations (EIS v. 1 2004, 37).

4.2.9 Oil Spills and Leaks

Pipelines are highly prone to corrosion and are a significant source of oil spills, leaks and fires (O'Rourke and Connolly 2003). Acute events and chronic discharges can lead to extensive environmental damage, including detrimental impacts to soils, water, vegetation, nesting areas, waterfowl, migratory birds, fish, fish eggs and larvae, wildlife, and livestock populations (Epstein and Selber 2002; O'Rourke and Connolly 2003; Van Hinte et al. 2007). The probability of an accidental spill for the MGP is not available. Data from the Alberta Energy and Utilities Board indicate that between 1980 and 1997 the oil and gas industry in Alberta averaged 674 pipeline failures per year. Approximately two-thirds of the failures were in small-diameter gathering system pipelines. Leaks accounted for 87 percent of the failures and ruptures for 13 percent. Ninety-five percent of spills were less than 100 m^3 of liquid or 100,000 m of gas. Internal or external corrosion was the cause of two-thirds of all failures (Severson-Baker 2004). The proponents have developed response, containment, and reclamation plans in order to mitigate negative impacts should an accidental spill occur (EIS v. 7 2004, 5.3).

Table 4.1 Potential Environmental Impacts

Impact Category	**Source of Impact**
Air Quality	• Burning of slash and debris • Combustion of fuel • Natural gas leaks/ flares • Generation of dust
Noise Levels	• Disturbance from construction and operation activities
Soils and Permafrost	• Initiation of freeze and thaw cycles • Reduction in terrain stability
Hydrology	• Changes to recharge and discharge patterns • Degradation of water quality

Fish Habitat, Health and Abundance	• Increased sediment loads • Changes in water flow • Noise disturbance • Increased fishing
Vegetation Distribution, Health and Abundance	• Air, hydrology and soil impacts • Introduction of non-native or invasive plants • Disturbance of rare plants
Wildlife Distribution, Health and Abundance	• Air, noise, hydrology, fish, soil and vegetation impacts • Disruption of feeding, nesting, denning or breeding patterns • Alteration of seasonal or daily movements • Increased human-wildlife conflicts • Increased human and predator access
Protected Areas	• Removal of lands from protected areas network
Oil Spills and Leaks	• Acute events and chronic discharges

Source: Bone 2003b; EIS v.1 2004; EIS v. 6 2004; Epstein and Selber 2002; O'Rourke and Connolly 2003; PIP 2003; Van Hinte 2005; Van Hinte et al. 2007

4.3 Socio-Economic Impacts

4.3.1 Procurement, Employment and Regional Economic Effects

Resource mega-projects such as the MGP generate significant employment opportunities during development and construction phases, but employment opportunities tend to diminish once the project becomes operational (Bone 2003b; EIS v. 1 2004; Van Hinte et al. 2007). A full description of the number and type of jobs expected throughout the lifespan of the MGP is included in chapter 3.5 of this report.

The MGP will entail significant capital and employment costs, but regional economic multipliers of these expenditures will be reduced if demand exceeds local supply. This is a common problem in northern regions. In order to meet demand, workers are brought in from labour pools in southern Canada and equipment and materials are produced in other regions, with the bulk of multiplier effects accruing to other regions (Bone 2003b; Van Hinte et al. 2007). The proponents plan to expand the northern labour force by implementing educational and skill-building programs for residents. Contracts will also be unbundled in order to enable northern businesses to participate in bidding procedures

(EIS v. 1 2004, 30). Supra-regulatory agreements (see section 5.6.7) may contain additional provisions for local training programs and hiring preferences.

4.3.2 Government Revenue

Mega-projects such as the MGP generate a significant amount of income for government (Bone 2003b; EIS v. 1 2004; Van Hinte et al. 2004). Aboriginal, territorial and federal governments will accrue revenue from the MGP through supra-regulatory agreements (see chapter 5.6.7) direct taxation and royalty payments (EIS v.1 2004, 30). However, financial benefits to the government of the NWT will be reduced if tax revenues decrease the formula financing grant from the federal government (EIS v. 1 2004, 31).

4.3.3 Demography

Demand for labour during construction tends to encourage migration to centres of project activity (Bone 2003b; EIS v. 1 2004; Van Hinte et al. 2007). Resulting population increases can contribute to adverse effects on community character, infrastructure and services (described in further detail in sections 4.3.4 to 4.3.12). The proponents plan to mitigate speculative in-migration to centres of project activity by hiring Aboriginal and other northern residents from their home communities and hiring southern residents only from southern locations (EIS v. 1 2004, 31).

4.3.4 Transportation Infrastructure and Services

The MGP will stimulate increased demand on road, rail, marine, and air transportation infrastructure and services during the construction phase (EIS v. 1 2004; Van Hinte et al. 2007), but these demands are expected to decrease during operations (EIS v. 1 2004). Negative impacts such as increased need for maintenance and repair are expected, though some positive impacts such as increases in transportation services are also anticipated (EIS v. 1 2004).

Transportation impacts will be managed through collaborative planning between the proponents, relevant transportation logistics managers, the GNWT Department of Transportation, local community leaders and the GNWT department of municipal and

community affairs (EIS v. 1 2004, 32). The proponents plan to negotiate provisions for the use of permanent and seasonal roads, as well as develop necessary controls for project-related traffic (EIS v. 1 2004, 32).

4.3.5 Energy and Utilities Infrastructure

Population increases in centres of project activity can lead to increased demand for energy and utilities infrastructure related to water, water treatment, sewage, solid waste treatment and disposal, and power supplies (Bone 2003b; Van Hinte et al. 2007). The proponents plan to mitigate negative impacts on energy and utilities infrastructure by discouraging speculative in-migration (see section 4.3.3). They also plan to concentrate workers in construction camps designed to be self-sufficient in terms of water treatment, sewage and solid waste treatment and disposal, and communications capabilities (EIS, v. 1 2004, 32).

4.3.6 Housing

A survey by the government of the NWT found that 29% of NWT households already have a housing problem and 16% are currently in core need (GNWT 2005a). The MGP has the potential to exacerbate existing housing problems by increasing demand for short- and long-term accommodation (Bone 2003b; EIS v. 1 2004), straining delivery of housing programs and services, decreasing the capacity of local housing organizations, and increasing costs of program and service delivery (GNWT 2005a). The proponents plan to reduce short-term demand for housing by providing accommodation for construction staff in camps, and developing hiring procedures to discourage speculative in-migration (EIS v. 1 2004, 32).

4.3.7 Recreation Resources

Resource development projects can increase demand for recreation complexes and other facilities (Bone 2003b; Van Hinte et al. 2007). The proponents plan to mitigate negative impacts on recreation resources by providing recreation facilities at construction camps (EIS v. 1 2004, 33). Additionally, there are high-capacity recreation complexes and facilities at Inuvik, Norman Wells and Hay River that will be able to accommodate an

increase in demand. Recreation facilities in Fort Simpson are operating at capacity and will not be able to sustain sizable increased use (EIS v. 1 2004, 33).

4.3.8 Community Well-Being

Fort Good Hope and Norman Wells will each have a 1,350-person construction camp located adjacent to their communities. Inuvik will be within 20 km of one 1,350- and one 250-person camp. Project workers will use community airstrips or airports when arriving at or departing from the construction camps, with resultant contact with community members (EIS v. 1 2004, 34). Community contact with foreigners and increased local earnings are expected to have both positive and negative impacts on community well-being (Bone 2003b; EIS v. 1 2004; Van Hinte et al. 2007). Positive impacts include increased income levels and increased demand for healthier foods and improved housing, as well as potential exposure to positive role models (GNWT 2005b; EIS v. 1 2004; Van Hinte et al. 2007). Negative impacts include exacerbation of social tensions and substantial increases in substance abuse, with resultant increases in demand for social, police and ambulance services (GNWT 2005b; EIS v. 1 2004; Van Hinte et al. 2007).

4.3.9 Health and Health Care Services

Health may be negatively impacted by stress associated with long shifts and social isolation, workplace injuries and fatalities, decreases to local air quality, and consumption of mammals and fish with elevated levels of oil or other contaminants (Epstein and Selber 2002; O'Rourke and Connolly 2003). Health may also be adversely affected by association with persons who engage in health-risking behaviours, exposure to communicable diseases such as sexually transmitted infections, and increases in substance abuse (EIS v. 1 2004; GNWT 2005a; Van Hinte et al. 2007). Increases in negative health impacts may have adverse effects on health care services by straining drug counselling and treatment services, social worker caseloads, and hospital services (GNWT 2005a). Camps will have their own medical services to help mitigate some of the negative impacts on community health services (EIS v.1 2004, 35).

4.3.10 Public Safety and Protection Services

RCMP detachments in many communities surrounding the MGP are already overburdened (EIS v. 1 2004). The NWT Department of Justice has suggested that increases in substance abuse, crime, and criminal activity may amplify need for RCMP resources, court workers and legal aid services, and community justice committee hearings and activities (GNWT 2005a). The proponents have stated that enhanced control of alcohol abuse will be the most effective way of reducing negative impacts on public safety and protection services (EIS v. 1 2004, 35).

4.3.11 Education Attainment and Services

Education attainment levels may be negatively impacted if youth respond to employment opportunities by leaving school prematurely (EIS v. 1 2004; GNWT 2005a; Van Hinte et al. 2007). However, some dropouts might return to school in order to qualify for more employment training (EIS v. 1 2004). Children of in-migrants could increase enrolment demands, which may have positive effects such as increased options for students, and negative effects such as increased demand on educational infrastructure (GNWT 2005a; EIS v. 1 2004).

4.3.12 Traditional Culture

Employment in the MGP may have a negative impact on traditional culture if employment commitments pre-empt harvesting opportunities, children receive less education in traditional harvesting methods, or cross-generational transference of traditional languages is reduced (EIS v. 1 2004; GNWT 2005a; Van Hinte et al. 2007). Traditional culture may also be negatively impacted if wildlife and fishery resources are contaminated through bioaccumulation of oils and other toxins and traditional harvesting areas are damaged (Epstein and Selber 2002; O'Rourke and Connolly 2003; Van Hinte et al. 2007). Traditional culture may be positively impacted if seasonal employment enables people to finance harvesting equipment needs, or if contact with southern residents makes traditional lifestyles appear more attractive (EIS v. 1 2004).

4.3.13 Other Economic Sectors

Labour shortages and reductions in available land may have a negative impact on timber and mining industries (EIS v. 1 2004; Van Hinte et al. 2007). Oil spills or increases in barge traffic may have a negative impact on commercial fisheries and damage to protected areas and heritage resources may have a negative impact on the tourism industry (Van Hinte et al. 2007).

4.3.14 Heritage Resources

In the NWT, heritage resources are managed by the *Mackenzie Valley Resource Management Act and Land Use Regulations, Territorial Land Use Regulations, NWT Archaeological Sites Regulations,* and *Historical Resources Act*. Heritage resources are defined in the aforementioned legislation as "locations where events took place in the past, or all of the objects that [those locations] contain, including any contextual information that might be associated with them that will aid in their interpretation, including natural specimens and documents or verbal accounts" (EIS v. 6 2004, 8-1).

Heritage resources may hold significant cultural, social, religious or economic importance to a particular group or community and may contribute to our understanding of local, regional, and natural history and prehistory (EIS v. 6 2004, 8-3). Heritage resources may get damaged during construction though clearing, grading, excavation, and soil piling activities. This may result in permanent loss of sites, damage to artefacts and features, or loss of provenience at sites (EIS v. 6 2004; Van Hinte et al. 2007). Knowledge of and accessibility to site locations may also increase, increasing potential for future damage (EIS v. 6 2004; Van Hinte et al. 2007). The proponents plan to mitigate negative impacts on heritage resources by following a Heritage Resources Management Plan which will be fully developed once the precise details of the project have been finalized (EIS v. 6 2004, 8-89).

Table 4.2 Potential Socio-Economic Impacts

Impact Category	**Source of Impact**

Procurement, Employment and Regional Economic Effects	• Employment opportunities during development and construction • Capital expenditures
Government Revenues	• Supra-Regulatory Agreements • Direct taxation • Generation of royalties
Demography	• Migration to centres of project activity
Transportation Infrastructure and Services	• Increased demand during construction phase • Increased need for maintenance and repair • Increased services
Energy and Utilities Infrastructure	• Increased demand for water, water treatment, sewage, solid waste treatment and disposal, and power supplies
Housing	• Increased demand for short- and long-term accommodation • Strain on housing programs and services • Decreased capacity in local housing organizations • Increased cost of program and service delivery
Recreation Resources	• Increased demand for recreation complexes and facilities
Community Well-Being	• Increased income levels • Increased demand for healthier foods • Increased demand for improved housing • Exposure to positive role models • Exacerbation of social tensions • Increased substance abuse
Health and Health Care Services	• Stress associated with long shifts and social isolation • Workplace injuries and Fatalities • Decreases in local air quality • Contamination of wild foods • Association with people who engage in health-risking behaviours • Exposure to communicable diseases • Increase in substance abuse
Public Safety and Protection Services	• Increase in substance abuse • Increase in crime and criminal activity
Education Attainment and Services	• Increase in number of youth who leave school early • Increase in number of adults who return to school for training • Increased enrolment demands
Traditional culture	• Decrease in time spent harvesting • Reduction in cross-generational transference of traditional languages and harvesting methods • Contamination of wildlife and fishery resources • Disturbance of traditional collecting sites • Increased ability to purchase harvesting equipment
Other Economic Sectors	• Labour shortages • Reductions in land available for timber and mining industries • Detrimental impact on commercial fisheries and tourism

Heritage Resources	• Permanent loss of sites • Damage to artefacts and features • Loss of provenience at sites • Increased knowledge of and access to sites

Source: Bone 2003b; EIS v.1 2004; EIS v.6 2004; Epstein and Selber 2002; GNWT 2005a; GNWT 2005b; O'Rourke and Connolly 2003; Van Hinte 2005; Van Hinte et al. 2007

4.4 Summary

The potential environmental and socio-economic impacts of the MGP vary both in duration and in magnitude. In general, the project has the potential to bring about significant socio-economic and environmental change. A number of impacts have both positive and negative implications. The proponents have proposed a number of strategies to maximize the potential benefits of the project and mitigate negative impacts. The summary of impacts provided in this chapter illustrates the importance of having regulatory review and approval processes that ensures sound evaluation, planning and management of the potential impacts oil and gas projects.

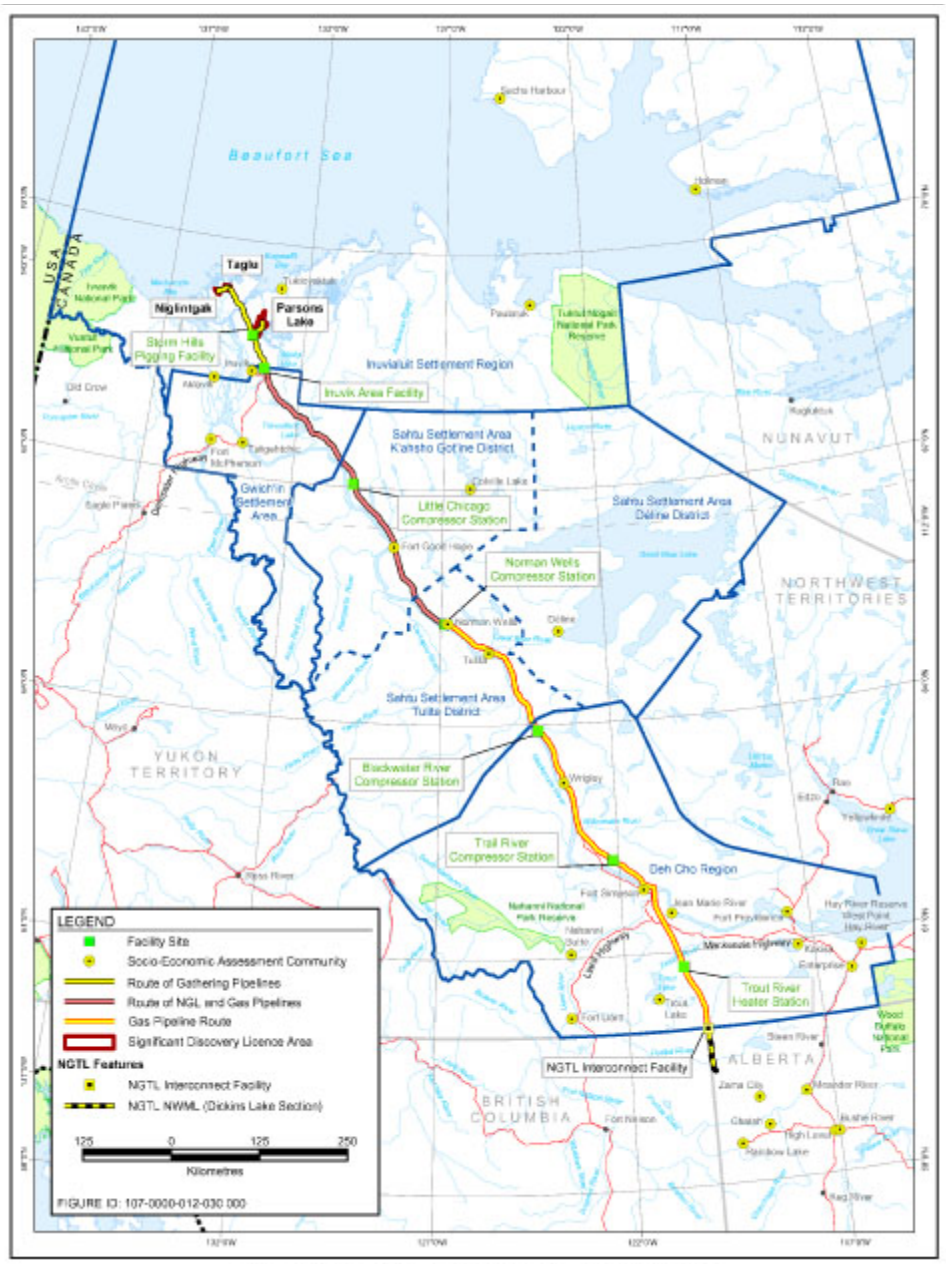
5 FEDERAL, TERRITORIAL AND ABORIGINAL INSTITUTIONS

5.1 Introduction

A number of federal and territorial agencies have regulatory structures and approval processes relevant to the MGP. The Federal agencies are Environment Canada, the Canadian Environmental Assessment Agency, National Energy Board, Department of Fisheries and Oceans, Department of Indian Affairs and Northern Development, and Transport Canada. Territorial agencies are the government of the NWT and the NWT Water Board.

In addition to the federal and territorial institutions, a number of Aboriginal boards and agencies have regulatory structures and approval processes relevant to the MGP. In Canada, comprehensive land claim agreements transfer land title from the federal government to Aboriginal groups. The agreements affect jurisdictional responsibility for land and water management, resulting in changes to the review and approval process for resource extraction projects such as the MGP. The MGP crosses three regions where comprehensive land claim agreements have been negotiated: the Inuvialuit Settlement Region; the Gwich'in Settlement Area; and the Sahtu Settlement Area. The MGP also crosses the traditional territory of the Deh Cho First Nations (the Deh Cho), where a comprehensive land claim agreement is currently being negotiated. Figure 1.1 provides an illustration of the land claim areas for the Inuvialuit, Gwich'in, Sahtu and Deh Cho.

Figure 5.1 Land Claim Areas



Source: EIS 2004, v. 1, 2.18

This chapter begins with a description of the relevant roles of the federal agencies and boards, followed by a description of the territorial agencies and boards. An overview of the Inuvialuit Final Agreement, the Gwich'in Comprehensive Land Claim Agreement, the Sahtu Dene and Metis Comprehensive Land Claim Agreement and the Deh Cho Process follows. The agreements' effects on the review and approval process for the MGP are described, followed by a discussion of the innovative agreements and

institutions associated with the regulatory review and approval process for the MGP. This chapter ends with a summary of the decision-making process

5.2 Federal Agencies

5.2.1 Environment Canada

Environment Canada (EC) administers Canada's national environmental assessment program (EC 2003). The national environmental assessment program ensures Departmental compliance with the *Canadian Environmental Assessment Act* (*CEA Act*), defines EC's position with respect to projects, coordinates and integrates science and policy objectives into decision-making and ensures national consistency in the application of the *CEA Act* (EC 2003). EC referred the MGP to an environmental assessment review panel pursuant to Section 29 of the *CEA Act* on August 21, 2003 (Northern Gas Project Secretariat undated).

5.2.2 Canadian Environmental Assessment Agency

The Canadian Environmental Assessment Agency (CEAA) is responsible for administering the *CEA Act*, which was passed in 1992. The purposes of the *CEA Act* are:

1. To ensure that the environmental effects of projects receive careful consideration before responsible authorities take actions in connection with them;
2. To encourage responsible authorities to take actions that promote sustainable development and thereby achieve or maintain a healthy environment and a healthy economy;
3. To ensure that the responsible authorities carry out their responsibilities in a coordinated manner with a view to eliminating unnecessary duplication in the environmental assessment process;
4. To ensure that projects that are to be carried out in Canada or on federal lands do not cause significant adverse environmental effects outside the jurisdictions in which the projects are carried out;

5. To ensure public participation in the environmental assessment process (Canada CEAA 1992).

The *CEA Act* applies when a physical project or activity occurs on federal land, receives federal funds, is carried out by the federal government, or requires certain federal permits (Boyd 2003). The *CEA Act* applies to the MGP because sections of the proposed project occur on federal land and a number of federal permits are required.

Projects that are referred to the CEAA either go through a screening assessment, comprehensive study, panel review, or mediation. Screenings require a brief assessment of the environmental and cumulative effects of a project (Boyd 2003). Comprehensive studies include a screening assessment and also incorporate factors such as the purpose of the project, alternative means of carrying it out, and the need for a follow-up monitoring program (Boyd 2003). Review panels and/or mediation are required whenever a comprehensive study indicates:

- the environmental impacts of a proposed project require further study
- the project will cause significant adverse effects
- there is public concern about the project (Boyd 2003)

The MGP was referred to a review panel for all of the aforementioned reasons. Review panels are comprised of appointed independent experts who hold public hearings about a project and make recommendations to government. Mediations are similar to review panels, but must include all interested parties in negotiating the outcomes of an environmental assessment. Mediations have never been used in Canada (Boyd 2003; Van Hinte et al. 2007).

In addition to being referred to a review panel through the *CEA Act*, The MGP also triggered environmental assessments under the *Inuvialuit Final Agreement* (see section 5.4.1) and the *Mackenzie Valley Resource Management Act* (see section 5.5.2). Section 40 of the *CEA Act* states that where multiple agencies have jurisdictional responsibility to conduct an assessment of the environmental effects of a project, the agencies may enter

into an agreement or arrangement to establish a Joint Review Panel (JRP) that harmonizes the various assessment processes. A JRP for the MGP was established in August, 2004. The JRP is comprised of seven impartial citizens selected on the basis of their knowledge and expertise related to the environmental review of the proposed MGP (JRP 2004). The process of establishing the JRP is elaborated upon in sections 5.6.3 and 5.6.5 of this chapter.

5.2.3 National Energy Board

In Canada, all companies require a Certificate of Public Convenience and Necessity (a "certificate") to construct, operate and maintain a petroleum pipeline. Certificates are issued by the National Energy Board (NEB), an independent federal regulatory agency that regulates the following aspects of the energy industry:

- construction and operation of interprovincial and international pipelines
- construction and operation of international and designated interprovincial power lines
- export and import of natural gas
- export of oil and electricity
- pipeline traffic, tolls and tariffs
- frontier oil and gas activities (Canada NEB 2006a)

The NEB has responsibilities under the *National Energy Board Act*, the *Canada Oil and Gas Operations Act (COGO Act)*, the *CEA Act*, the *Northern Pipeline Act*, and certain provisions of the *Canada Petroleum Resources Act* (Canada NEB 2006a). The NEB is mandated to consider matters of public interest that may be affected by application approvals. The NEB is considered a Responsible Authority under the *CEA Act* and follows the uniform requirements for environmental assessment set out in the *CEA Act* for all federal government departments and agencies that conduct environmental assessments (Canada NEB 2006a).

The NEB became involved with the review and approval process for the MGP in October 2004 when the proponents applied for:

- a Certificate for the MGP pursuant to Parts III and IV of the *National Energy Board Act*, filed by Imperial Oil on behalf of itself, the Aboriginal Pipeline Group, ConocoPhillips, Shell, and ExxonMobil
- authorization for the Mackenzie Gathering System pursuant to paragraph 5.(1)(b) of the *Canada Oil and Gas Operations Act* (*COGO Act*), filed by Imperial Oil on behalf of itself, ConocoPhillips, Shell and ExxonMobil
- a Development Plan for the Taglu Field pursuant to section 5.1 of the *COGO Act*, filed by Imperial Oil
- a Development Plan for the Parsons Lake Field pursuant to section 5.1 of the *COGO Act*, filed by ConocoPhilips on behalf of itself and ExxonMobil
- a Development Plan for the Niglintgak Field pursuant to section 5.1 of the *COGO Act*, filed by Shell (Canada NEB 2004)

The NEB designated an NEB panel to consider the MGP application pursuant to the *National Energy Board Act.* In its hearing process, the NEB panel will examine:

- the need for, economic feasibility and potential commercial impacts of the proposed project
- appropriateness of the general routes of the proposed pipelines
- method of toll and tariff regulation
- suitability of the design
- terms and conditions to be included in any approval the NEB may issue
- appropriateness of the Applicants' public consultation program and the adequacy of Aboriginal consultation
- ability of the proponents to manage risk and financial liabilities related to the construction, operation and decommissioning of the proposed project
- appropriateness of the Development Plans for the Taglu, Parsons Lake and Niglintgak fields

- estimated cost of construction of the pipeline for the purpose of subsection 5.2(1) of the *National Energy Board Cost Recovery Regulations*
- the reports from the JRP process (Canada NEB 2005, Appendix I)

The NEB panel will base its decision to grant a certificate for the MGP on outcomes of the regulatory hearings, recommendations issued by the JRP based on the outcomes of the environmental and socio-economic hearings, and the governmental response to the JRP report (*Coordination Agreement* 2004, 5). If the NEB panel decides a certificate should be issued, the federal Cabinet must authorize this decision. If the NEB panel decides that a certificate should not be issued, no further approval of the NEB decision is needed and the federal Cabinet cannot override this decision (JRP undated). This decision-making process is described in further detail in section 5.7 of this chapter.

5.2.4 Department of Fisheries and Oceans

The Department of Fisheries and Oceans (DFO) is responsible for developing and implementing programs and policies in support of Canada's economic, ecological and scientific interests in oceans and inland waters (Canada DFO 2006). DFO is guided by a number of Acts, including the *Fisheries Act*, which grants responsibility to the Minister for the management of fisheries, habitat and aquaculture (Canada DFO 2006a).

Section 35 of the *Fisheries Act* prohibits the harmful alteration, disruption or destruction of fish habitat without an authorization from the Minister of Fisheries and Oceans or a regulation made by the Governor-in-Council (Canada DFO 2006b). Section 32 of the *Fisheries Act* prohibits a person from killing fish by a means other than by fishing unless the person is authorized to do so (Canada DFO 2006b). DFO's involvement in the regulatory review and approval process for the MGP is primarily based upon sections 35 and 32 of the Fisheries Act (Canada DFO 2006b).

The MGP natural gas and natural gas liquids pipelines will cross over 600 streams and rivers, and will pass near a number of lakes that support recreational, commercial and subsistence fisheries. The MGP will also affect the Mackenzie Delta region, which may have a negative impact on marine mammals and anadromous fish (Canada DFO 2006b).

All water bodies in the project area will be considered in DFO's review of the MGP as they potentially support fish and/or fish habitat (Canada DFO 2006b).

DFO has submitted an *Intervention to the Mackenzie Gas Project* to the JRP. The report analyzes the environmental impact statement in terms of methodology, cumulative impact analysis and mitigation and monitoring techniques. The report also contains DFO's recommendations to the JRP for each of the sections of the environmental impact statement that are within DFO's jurisdiction. The DFO will remain involved in the review and assessment of the MGP through participation in the JRP hearings (Canada DFO 2006b).

5.2.5 Department of Indian Affairs and Northern Development

The Department of Indian Affairs and Northern Development (DIAND) is responsible for administering Crown land and water resources in northern Canada. DIAND is responsible for administering the *Territorial Lands Act*, the *Federal Real Property Act*, and the *Arctic Waters Pollution Prevention Act*. The *Territorial Lands Act* relates to the management of Crown lands in the NWT and Nunavut, the *Federal Real Property Act* relates to the acquisition, administration and disposition of property by the government of Canada, and the *Arctic Waters Pollution Prevention Act* prevents pollution of areas of arctic waters adjacent to the mainland and islands of the Canadian arctic. All three Acts are relevant to the MGP (*Coordination Agreement* 2004).

5.2.6 Transport Canada

Transport Canada (TC) implements the transportation policies, programs and goals set by the government of Canada (TC 2006). TC's regulations apply to facilities, equipment and personnel (TC 2006). TC is responsible for ensuring the MGP meets regulatory requirements for land and ice airstrips, marine shipping, bridges, roads, helicopter landing pads, rail and aircraft under the *National Energy Board Act* and the *Navigable Waters Protection Act*, (TC 2006).

Like DFO, TC reviewed and made recommendations on the environmental impact statement submitted by the proponents. TC will continue to provide advice to the JRP and the NEB (TC 2006).

5.3 Territorial Agencies

The Government of the NWT does not own any land within the NWT, but has statutory responsibility over issues such as health and safety of workers and residents as well as some aspects of the regulatory review and approval process for the MGP. The government of the NWT is responsible for administering the *Commissioner's Lands Act*, the *Explosives Use Act*, the *Forest Management Act*, the *Public Health Act*, and the *Safety Act* as the Acts relate to the MGP (*Coordination Agreement* 2004).

5.3.1 Mackenzie Valley Pipeline Office

The Mackenzie Valley pipeline office was established to coordinate the territorial government's planning and response related to the MGP (Municipal and Community Affairs [MACA] 2004). The Mackenzie Valley pipeline office is also charged with acting as a key contact at a senior government level for industry, the federal government, NWT communities and Aboriginal governments; managing external and internal information and communication with respect to the government of the NWT's strategic responses to the development of the MGP; and coordinating the negotiation of access and benefit agreements between the MGP proponents and affected communities (MACA 2004).

5.3.2 Northwest Territories Water Board

The Northwest Territories Water Board (NWTWB) is responsible for administering the *Northwest Territories Water Act* within the Inuvialuit Settlement Region. Under this *Act*, the NWTWB must issue a license for the use of any waters or disposal of any waterborne waste (NWTWB 2006). The NWTWB is comprised of four to nine members who are nominated by the government of the NWT and the government of Canada and appointed by the Minister of Indian and Northern Affairs and Northern Development (NWTWB

2006). Shell Canada, ConocoPhillips, and Imperial Oil have all applied for numerous water licenses through the NWTWB (NWTWB 2006).

5.4 Land Claim Agreements

Land claim agreements are constitutionally recognized and affirmed in section 35 of the *Canadian Constitution Act, 1982*, which states

1. The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed;
2. In this Act, "aboriginal peoples of Canada" include the Indian, Inuit, and Metis peoples of Canada;
3. For greater certainty, in subsection (1) "treaty rights" include rights that now exist by way of land claims agreements or may be so acquired.

Sections 35(1) and 35(3) are important because they afford land claim agreements negotiated after 1982, such as the Inuvialuit, Sahtu and Gwich'in agreements, the same degree of constitutional protection as pre-1982 treaties. Any departure from the terms of a comprehensive land claim agreement would require the consent of the Aboriginal party and the governments involved (Muir 1994).

5.4.1 Inuvialuit Final Agreement

The *Inuvialuit Final Agreement* (IFA) was signed on June 5, 1984 by the federal government and the Inuvialuit of the Western Arctic. The IFA was given statutory endorsement through the *Western Arctic (Inuvialuit) Claims Settlement Act*, which was enacted on July 25, 1984 (Indian and Northern Affairs Canada [INAC] 2006). The IFA was the second comprehensive land claim agreement signed in Canada and the first comprehensive land claim agreement signed north of the 60th parallel (Canada INAC 2006).

The provisions of the IFA apply to the Inuvialuit Settlement Region (ISR), which is comprised of the northernmost reaches of the Yukon Territory, the northwestern corner

of the NWT, the eastern half of the Beaufort Sea, Banks Island, some of the Arctic Ocean, most of the western part of Victoria Island and some of the Parry Islands (Keeping 1989). The ISR is bounded on the north by the Beaufort Sea and the Amundsen Gulf, and is bounded on the south by the Gwich'in Settlement Area and the Sahtu Settlement Area (see Figure 5.1).

The land within the ISR is under either Inuvialuit or federal jurisdiction. The federal government has jurisdiction over all federal lands within the ISA, subject to the IFA (Canada INAC 1998). The Inuvialuit have title to all non-federal land, as well as the beds of all lakes, rivers and other water bodies within the ISR. The IFA transferred 90,065 square kilometres of land from the federal government to the Inuvialuit, comprised of:

- 77,115 square kilometres with surface and subsurface title
- 12,950 square kilometres with surface title only (IFA Implementation Coordinating Committee [IFAICC] 2001)

5.4.2 Gwich'in Comprehensive Land Claim Agreement

The Gwich'in Comprehensive Land Claim Agreement (GCLCA) was signed between the Gwich'in Tribal Council (GTC), the government of the NWT and the government of Canada on April 22, 1992 (Muir 1994). The GCLCA was enacted on December 22, 1992 through the *Gwich'in Land Claim Settlement Act* (Implementation Committee for the GCLCA [ICGCLCA] 2002). The provisions of the GCLCA apply to the Gwich'in Settlement Area (GSA), which is south of the ISR and is bounded on the east by the Sahtu Settlement Area (see Figure 5.1).

The GCLCA transferred 22, 422 square kilometres of land from the federal government to the Gwich'in, comprised of:

- 18,030 square kilometres of surface title only
- 4,299 square kilometres of surface and subsurface title
- 93 square kilometres of ownership limited to mines and minerals (GCLCA 1992)

5.4.3 Sahtu Dene and Metis Comprehensive Land Claim Agreement

The Sahtu Dene and Metis Comprehensive Land Claim Agreement (SCLCA) was signed between the Chiefs and Metis Presidents representing the Sahtu region Dene and Metis, the Sahtu Tribal Council, the government of the NWT, and the government of Canada on September 6, 1993. The SCLCA was enacted on June 23, 1994 through the *Sahtu Dene and Metis Land Claim Settlement Act* (Implementation Committee for the SCLCA [ICSCLCA] 2001).

The SCLCA applies to the Sahtu Settlement Area (SSA), which is bounded on the north by the GSA and the ISR, and on the south by the unsettled claim lands of the Deh Cho and North Slave First Nations (see Figure 5.1). The communities of Colville Lake, Fort Good Hope, Tulita, Deline and Norman Wells are within the SSA.

The SCLCA transferred 34, 436 square kilometres from the federal government to the Sahtu Dene and Metis, comprised of:

- 39,624 square kilometres of surface title
- 1,813 square kilometres including of surface and subsurface title (SCLCA 1993)

5.4.4 Deh Cho Process

In 1999, the Deh Cho began negotiating a land, resources and self-government agreement with the government of the NWT and the government of Canada (Ministry of Aboriginal Affairs [MAA] undated). The three parties reached consensus on a Framework Agreement and an Interim Measures Agreement (IMA) in February 2001 (MAA undated). The Framework Agreement and the IMA serve to protect Deh Cho traditional territory and provide the Deh Cho with economic benefits from resource development (MAA undated).

5.5 Effects of Land Claim Agreements on MGP

The three comprehensive land claim agreements and the Deh Cho Process have all influenced the review and approval process for the MGP by increasing Aboriginal

representation on land and water boards and increasing community involvement in project review. However, the way that the IFA has influenced the review and approval process is distinctly different than the ways that GCLCA, SCLCA and the Deh Cho Process have.

Land and water boards established through the IFA complement previously existing administrative structures, processes and legislation (Keeping 1989) whereas boards developed through the GCLCA and SCLCA supercede and replace them. The land and water boards in the Deh Cho region are similar to those within the GSA and SSA because they were all established through the *Mackenzie Valley Resource Management Act* (*MVRMA*) (see section 5.5.2).

The following sections highlight how boards established through all three land claim agreements have influenced the regulatory review and approval process for projects within the NWT. Boards that have been established through the IFA are described first, followed by a description of the boards established through the *MVRMA*, GCLCA, and SCLCA. Changes to the review and approval process that have arisen through the Deh Cho Process are also explained.

5.5.1 Inuvialuit Boards

Table 5.1 briefly describes the seven boards established through the IFA in order to involve the Inuvialuit in resource management.

Table 5.1 Boards Established Through the IFA

Board	**Role**
Hunters and Trappers Committee	Established in each of the six Inuvialuit communities in order to advise the Inuvialuit Game Council on local wildlife matters, make bylaws governing the exercise of certain Inuvialuit preferential harvest rights under the IFA, and sub-allocate quotas
Inuvialuit Game Council (IGC)	Responsible for upholding and administering the Inuvialuit rights recognized under the IFA

Environmental Impact Screening Committee (EISC)	Assess whether proposed developments require detailed environmental impact screenings
Environmental Impact Review Board (EIRB)	Carry out public reviews of development proposals deemed necessary by the EISC
Fisheries Joint Management Committee	Advise the Minister of Fisheries and Oceans on matters relating to fisheries and marine mammals in the ISR
Wildlife Management Advisory Council - NWT	Advise government and other appropriate bodies on wildlife conservation matters in the NWT portion of the ISR
Wildlife Management Advisory Council – North Slope	Advise government and other appropriate bodies on wildlife conservation matters in the Yukon North Slope
Arbitration Board	Provide a mechanism to arbitrate disputes between the Inuvialuit and industry or the governments of Canada, the NWT or the Yukon

Source: IFAICC 2001

Three boards (the Inuvialuit Game Council, Environmental Impact Screening Committee, and the Environmental Impact Review Board) have had a significant impact on the review and approval process for the MGP and are described in further detail in the following three subsections.

5.5.1.1 Inuvialuit Game Council (IGC)

The IGC is comprised of one director and one alternate from each of the six Hunters and Trappers Committees within the ISR, and one chair who is elected by the members of the IGC (IFAICC 2001).

The IGC is responsible for the following:

- upholding and administering harvesting rights recognized under the IFA
- representing the Inuvialuit in all matters related to renewable resource management in the ISR
- appointing all Inuvialuit representatives to all joint wildlife and environmental co-management bodies established under the IFA (IFAICC 2001)

5.5.1.2 Environmental Impact Screening Committee

The EISC was established under subsection 11(3) of the IFA. It is comprised of seven members, including three members appointed by the IGC, a total of three members appointed by the government of Canada, the government of the NWT and the government of the Yukon, and a chair appointed by the government of Canada with consent of the IGC (IFAICC 2001).

The EISC is responsible for screening all proposed developments that are likely to cause a negative environmental impact within the ISR. Applications for developments that take place on federal land within the ISR are automatically screened (IFAICC 2001). Applications for developments that take place on Inuvialuit land within the ISR are only screened upon request from the Inuvialuit. The EISC screens development applications and determines if environmental impact review is required, is not required, or the application is deficient and another application is required.

The IFA mandates environmental impact review when projects could have significant negative impact on the environment or on present or future wildlife harvesting. The EISC refers applications that require review to the EIRB (see section 5.5.1.3) or other appropriate review bodies with public environmental review processes, such as the Canadian Environmental Assessment Agency (IFAICC 2001). The EISC referred the MGP to the EIRB because of the project's potential to have significant negative impact on the environment or on future wildlife harvesting.

5.5.1.3 Environmental Impact Review Board

The EIRB was established under subsection 11(8) of the IFA (IFAICC 2001). Like the EISC, the EIRB is comprised of seven members, including three members appointed by the IGC, a total of three members appointed by the government of Canada, the government of the NWT and the government of the Yukon, and a chair appointed by the government of Canada with consent of the IGC (IFAICC 2001).

The EIRB is responsible for carrying out a detailed environmental assessment and public review of development projects referred to it by the EISC. The EIRB recommends to the relevant governmental approval body whether or not the development should proceed and, if it should, on what terms and conditions (IFAICC 2001; Keeping 1989).

Nothing within section 11 of the IFA restricts the power or obligation of the federal government to carry out EIA and review under the laws and policies of Canada. Thus, if either the EISC or the EIRB process set out in the IFA is triggered, and other federal EIA processes are also triggered, the proponent might be required to participate in two independent but parallel assessments (Keeping 1989).

As explained previously, the portion of the MGP within the ISR triggered both federal and Inuvialuit EIA processes. The federal and Inuvialuit agencies worked together to harmonize the processes in order to avoid duplication. The details of the harmonization agreement are contained in section 5.6.3 of this chapter.

5.5.2 Mackenzie Valley Resource Management Act

The *Mackenzie Valley Resource Management Act* (*MVRMA*) was proclaimed on December 22, 1998 and applies to the entire Mackenzie Valley (Canada INAC 2001). In the *MVRMA*, the Mackenzie Valley is defined as all of the Northwest Territories, *excluding* the ISR and Wood Buffalo National Park. The *MVRMA* integrates land and water management throughout the Mackenzie Valley and establishes institutes of public government pursuant to the GCLCA and the SCLCA (Canada INAC 2001). Specifically, the *MVRMA* establishes boards that:

- regulate all uses of land and water
- prepare regional land use plans to guide development
- carry out environmental assessment and review processes

Some of the boards established through the *MVRMA* have jurisdiction over the entire Mackenzie Valley, and some apply only to the GSA or the SSA. Half of the members of each board are nominated by the First Nation(s) within each board's jurisdiction and half

are nominated by the federal and territorial governments (Canada INAC 2001). Table 5.2 provides a summary of the boards established through the *MVRMA*.

Table 5.2 Boards Established through the *MVRMA*

Board	**Role**
Valley-Wide	
Mackenzie Valley Environmental Impact Review Board (MVEIRB)	Conduct environmental assessment and review of development projects in the Mackenzie Valley
Mackenzie Valley Land and Water Board (MVLWB)	Issue land use permits and water licences in *unsettled* land claim areas of the Mackenzie Valley
Regional	
Gwich'in Land and Water Board (GLWB)	Regulate the use of land and water throughout the GSA by issuing, amending, renewing and suspending land use permits and water licenses
Sahtu Land and Water Board (SLWB)	Regulate the use of land and water throughout the SSA by issuing, amending, renewing and suspending land use permits and water licenses
Gwich'in Land Use Planning Board	Develop and implement a land use plan for the GSA that provides for the conservation, development and utilization of land, resources and waters for the benefit of all Canadians, with special attention devoted to the needs of the Gwich'in
Sahtu Land Use Planning Board	Develop and implement a land use plan for all lands outside of municipal boundaries in the SSA

Source: Canada INAC 2001; GCLCA 2001; GLWB undated; ICGCLCA 2002; ICSCLCA 2001; SSI undated

All of the boards described in Table 5.2 have a role in the review and approval of the MGP. The boards with the most significant role are the MVEIRB, MVLWB, GLWB, and SLWB. Each of these boards is described in the following subsections.

5.5.2.1 Mackenzie Valley Environmental Impact Review Board

The MVEIRB is the agency of government mandated under the *Mackenzie Valley Resource Management Act* to conduct environmental assessment and review of development projects within the Mackenzie Valley. The *Mackenzie Valley Resource Management Act* replaces the *Canadian Environmental Assessment Act* in the Mackenzie Valley, except under specific circumstances (GCLCA 2001). The MVEIRB is comprised of First Nations representatives nominated by the Gwich'in Tribal Council, the Sahtu Secretariat Incorporated, the Tlicho Government and the Deh Cho First Nations as well as federal and territorial government representatives. The federal Minister of Indian and Northern Affairs appoints the members to the MVEIRB (MVEIRB 2005).

The MVEIRB is an innovative agency that ensures that Aboriginal participation in environmental assessment extends beyond consultation. Through its diverse membership, the MVEIRB also encourages collaboration between various federal, territorial and Aboriginal governments. The MVEIRB is funded by the federal government but is independent of the federal and territorial governments (MVEIRB, 2005).

5.5.2.2 Mackenzie Valley Land and Water Board

The MVLWB is responsible for issuing land use permits and water licences in unsettled land claim areas of the Mackenzie Valley, including the Deh Cho traditional lands (Canada INAC 2001). The MVLWB is also responsible for processing transboundary land and water use applications, ensuring consistency in the application of the legislation throughout the Mackenzie Valley, and administering all land use permits and water licences that were issued prior to implementation of the *MVRMA* (Canada INAC 2001).

5.5.2.3 Gwich'in Land and Water Board

The GLWB is responsible for amending, issuing or renewing land use permits and water licenses, and setting terms and conditions for land and water use in the GSA (GLWB undated). The GLWB has influenced the regulatory review and approval process for the MGP by directly involving communities and all other appropriate groups in all permitting

and licensing decisions, and incorporating both traditional and scientific knowledge about the physical and social environment into decision-making (GLWB undated).

5.5.2.4 Sahtu Land and Water Board

The SLWB issues, amends and renews licenses, permits and other authorizations for all land and water use, including those necessary for exercising subsurface rights (SSI undated). The SLWB holds public hearings with communities affected by proposed developments (ICSCLCA 2001).

In addition to the boards established through the *MVRMA*, a number of other boards created through the land claim processes have influenced the development, review and evaluation of the MGP. These boards are described in the following sections.

5.5.3 Gwich'in Boards

The GCLCA established the Gwich'in Renewable Resources Board, the Gwich'in Tribal Council, and the Gwich'in Arbitration Panel. The roles of each of these boards are briefly described in Table 5.3. The role of the Gwich'in Tribal Council is described in further detail in subsection 5.5.3.1.

Table 5.3 Boards Established through the GCLCA

Board	**Role**
Gwich'in Renewable Resources Board	Ensure the sustainable use of wildlife, fish and forests
Gwich'in Tribal Council (GTC)	Represent Gwich'in beneficiaries on the implementation committee and ensure the protection of Gwich'in rights and interests as outlined in the GCLCA
Gwich'in Arbitration Panel	Provide a mechanism to arbitrate disputes between the Gwich'in and industry or the governments of Canada, the NWT or the Yukon during implementation of the GCLCA

Source: ICGCLCA 2002

5.5.3.1 Gwich'in Tribal Council

The land transferred to the Gwich'in through the GCLCA is held by the GTC. The GTC was incorporated in 1992 and is responsible for administering land and managing the resources for the benefit of all Gwich'in beneficiaries (GTC undated). The GTC helps develop legislative and policy frameworks to ensure that Gwich'in interests are represented and wildlife, habitat, and harvesting rights are preserved (GTC undated).

The GTC has influenced the MGP review and approval process because the GTC nominates the Gwich'in board members for the MVEIRB, GLWB, Gwich'in Land Use Planning Board, Gwich'in Renewable Resources Board and the Gwich'in Arbitration Panel (ICGCLA 2002).

5.5.4 Sahtu Boards

The SCLCA established the Sahtu Renewable Resources Board, the Sahtu Secretariat Incorporated and the Sahtu Arbitration Panel. The roles of each of these boards are briefly described in Table 5.4. The role of the Sahtu Secretariat Incorporated is described in further detail in subsection 5.5.4.1.

Table 5.4 Boards Established through the SCLCA

Board	**Role**
Sahtu Renewable Resources Board	Protect, conserve and manage all renewable resources within the SSA in a sustainable manner to meet or exceed the needs of the public today and in the future for generations to come
Sahtu Secretariat Incorporated (SSI)	Implement the SCLCA and deal with issues and concerns of the Sahtu Dene and Metis
Sahtu Arbitration Panel	Provide a mechanism to resolve disputes that arise in the implementation of the SCLCA

Source: ICSCLCA 2001

5.5.4.1 Sahtu Secretariat Incorporated

The SSI is comprised of the four Dene and three Metis Sahtu Land Corporations found within the SSA (ICSCLCA 2001). Unlike the GTC, the SSI does not own any land; title to all settlement lands outside of municipalities is vested to the respective district land corporations in Deline, Tulita and K'asho Got'ine (ICSCLCA 2001).

The SSI is the point of contact for all government agencies and departments on issues including education, health, environment, highways, wildlife, and political and economic development. The SSI has influenced the MGP review and approval process because the SSI nominates the Sahtu Dene and Metis board members for the MVEIRB, SLWB, Sahtu Land Use Planning Board, Sahtu Renewable Resources Board and the Sahtu Arbitration Panel (ICSCLA 2001). The SSI is also the only joint Dene and Metis regional Aboriginal organization in Canada (ICSCLA 2001).

5.5.5 Deh Cho Process

The IMA negotiated between the Deh Cho, the government of the NWT and the government of Canada provides for Deh Cho participation in the MVEIRB, and also provides for the creation of a Deh Cho panel on the MVLWB (IMA 2001). As such, the IMA has increased Deh Cho participation in the review and approval of the MGP. The IMA also requires benefits plans be negotiated for any work, activity or development that requires the authorization or approval of the NEB under the *Canada Oil and Gas Operations Act* within Deh Cho territory.

5.6 Innovative Institutions and Agreements

The regulatory review and approval process for the MGP is complex given the number of Aboriginal, federal and territorial agencies with review and approval responsibilities. In anticipation of and in response to the MGP a number of innovative agreements that coordinate the agencies' responsibilities and seek to increase Aboriginal involvement in the regulatory review and approval process have been developed. The following

subsections describe the *Cooperation Plan*, *Consolidated Information Requirements*, Joint Review Panel, *Coordination Agreement*, coordination of the technical and public hearings, the Northern Gas Project Secretariat, and development of supra-regulatory agreements.

5.6.1 *Cooperation Plan*

Before the MGP application was submitted by the proponents, the chairs of the boards and agencies responsible for assessing and regulating energy developments in the NWT developed an agreement to outline a common understanding and approach for evaluating large pipeline projects in the NWT (Canada NEB 2002a). The focus of the agreement was to coordinate the eight agencies whose public hearing processes would be triggered by a large pipeline proposal (see Table 5.5) (*Cooperation Plan* 2002). Six other agencies with direct interest in environmental impact assessment and regulatory matters were also involved (see Table 5.5) (*Cooperation Plan* 2002). The agreement that the parties developed was finalized on June 20, 2002 and is entitled the *Cooperation Plan for Coordinated Review of a Potential Major Northern Pipeline* (the *Cooperation Plan*).

Table 5.5 Agencies Involved in Developing the *Cooperation Plan*

Agencies with Public Hearing Processes
National Energy Board
Canadian Environmental Assessment Agency
Environmental Impact Review Board For the Inuvialuit Settlement Region
Mackenzie Valley Environmental Impact Review Board
Mackenzie Valley Land and Water Board
Northwest Territories Water Board
Sahtu Land and Water Board
Gwich'in Land and Water Board
Agencies with Direct Interest in Environmental Impact Assessment And Regulatory Matters
Environmental Impact Screening Committee For the Inuvialuit Settlement Region
Inuvialuit Land Administration
Inuvialuit Land Administration Commission
Joint Secretariat for the Inuvialuit Settlement Region
Department of Indian Affairs and Northern Development
Inuvialuit Game Council

Observers
Government of the Northwest Territories
Nominee of the Deh Cho First Nation to the Mackenzie Valley Land and Water Board
Government of the Yukon

Source: *Cooperation Plan* 2002

5.6.2 *Consolidated Information Requirements*

On September 30, 2002 the chairs of the agencies involved in developing the *Cooperation Plan* released a document entitled the *Consolidated Information Requirements for the Environmental Impact Assessment and Regulatory Review of a Northern Gas Pipeline Project through the NWT* (the *Consolidated Information Requirements*) (Canada NEB 2002b). The document guides potential pipeline proponents through the process of collecting and analyzing baseline environmental and socio-economic data and technical information needed for preparing an Environmental Impact Statement (EIS) and other regulatory applications (EIS 2004).

5.6.3 Joint Review Panel

The MGP proponents developed a Preliminary Information Package (PIP) based upon the *Consolidated Information Requirements* and submitted it to the *Cooperation Plan* parties on June 18, 2003 (EIS 2004). The PIP was accepted as complete on June 30, 2003, triggering environmental impact assessments under the following:

- the *Canadian Environmental Assessment Act*
- the *Inuvialuit Final Agreement*
- the *Mackenzie Valley Resource Management Act* (*Agreement for an Environmental Impact Review of the MGP* [*Agreement for an EIR*] 2004)

On August 18, 2004, representatives of the agencies responsible for implementing the three Acts established an independent JRP that would meet the needs of all three Acts and would eliminate duplication during the environmental assessment process. The JRP consists of seven members, including the chair. The MVEIRB selected and appointed three of the members, the Minister of the Environment selected and appointed two members, and the IGC selected two members, who were appointed by the Minister of the

Environment. The mandate of the JRP is to evaluate the potential impacts of the MGP on the environment and lives of the people in the project area (*Agreement for an EIR* 2004).

The seven members of the JRP have a diversity of experiences and represent a variety of interests. Ms. Gina Dolphus is a resident of Deline and has spent many years working in politics, counselling, advocacy, lobbying, management and administration. She has been Trustee for the Inuvik Regional Health Board, vice-chair for the Sahtu Divisional Board of Education and was mayor of Deline. Mr. Barry Greenland has acted as Sub-Chief to the Inuvik Native Band for 10 years and has acted as director of the Gwich'in Tribal Council Board and director of the Nihat Gwich'in Development Corporation. Mr. Percy Hardisty is the Chairperson for the Deh Cho Friendship Centre and was twice elected as Chief of the Pehdzeh Ki First Nation. Mr. Rowland Harrison has been a member of the NEB since 1997. He has worked as a professor of law at several Canadian universities and has taught natural resources law, constitutional law and administrative law (JRP undated).

Mr. Tyson Pertschy is a Board member of the Inuvialuit Arbitration Committee and has been a Federal Fishery Officer, Commissioner for the Inuvialuit Land Commission, and a member of the Board of Directors for the Inuvialuit Investment Committee. Mr. Peter Usher is a geographer who was involved the Inuvialuit land claim and the Mackenzie Valley Pipeline Inquiry during the 1970s. He was a member of the JRP for the Voisey's Bay Mine-Mill Project in Labrador from 1997 to 1999 and was also appointed to chair the NWT Wildlife Management Advisory Council from 1997-2000. Mr. Robert Hornal is the chair of the JRP. He is a principal of Robert Hornal and Associates Ltd. and has forty years of experience in resource management, environmental and socio-economic assessment, land claim administration, land use planning and government and regulatory affairs (JRP undated).

The JRPs first major task was to evaluate the acceptability and comprehensiveness of the EIS, which was submitted by the proponents in October 2004 (EIS, 2004). Their evaluation was based upon the degree to which the EIS satisfied the Terms of Reference

for an EIS that were finalized in August 2004 by representatives of the agencies responsible for implementing the *Canadian Environmental Assessment Act*, Inuvialuit Final Agreement and the *Mackenzie Valley Resource Management Act* (EIS 2004). The EIS was reviewed extensively by the JRP as well as the public (MGP Producer Group 2004). Several requests for additional information were made, and on October 7, 2005 the JRP determined that the EIS contained sufficient information to proceed to the public hearing phase of the environmental impact review (JRP 2005).

5.6.4 *Coordination Agreement*

There are a number of agencies with responsibilities for administering Acts or Agreements related to the MGP (see Table 5.6). In April 2004, all of these agencies signed the *Agreement for the Coordination of the Regulatory Review of the Mackenzie Gas Project* (the *Coordination Agreement*). The *Coordination Agreement* (2004) was developed specifically for the MGP whereas the *Cooperation Plan* (2002) was developed for any large pipeline proposal in the NWT.

Table 5.6 Legislated Mandates of Agencies with Regulatory Responsibilities

Party	Act/ Agreement Responsible for Administering
Inuvialuit Land Administration and Inuvialuit Land Administration Commission	- *Inuvialuit Final Agreement*
National Energy Board	- *National Energy Board Act* - *Canada Oil and Gas Operations Act* - *Canada Petroleum Resources Act*
Northwest Territories Water Board	- *NWT Waters Act*
Mackenzie Valley Land and Water Board (including the Gwich'in Water Board and Sahtu Land and Water Board)	- *Mackenzie Valley Resource Management Act*
Department of Fisheries and Oceans	- *Fisheries Act* - *Oceans Act*
Department of Indian Affairs and Northern Development	- *Territorial Lands Act* - *Federal Real Property Act* - *Arctic Waters Pollution Prevention Act*
Environment Canada	- *Canadian Environmental Protection Act* - *Migratory Birds Convention Act* - *Species at Risk Act*
Transport Canada	- *National Energy Board Act (Section 108)* - *Navigable Waters Protection Act*

Government of the Northwest Territories (various Departments)	- *Commissioner's Lands Act* - *Explosives Use Act* - *Forest Management Act* - *Public Health Act* - *Safety Act*

Source: *Coordination Agreement* 2004; EIS 2004

The *Coordination Agreement* was developed in order to coordinate the regulatory review process for the MGP; avoid unnecessary duplication and seek process efficiency; contribute to clarity, certainty and timeliness; and enhance public participation in the review of the MGP (*Coordination Agreement* 2004). Public hearing processes for all regulatory agencies are being coordinated and conducted by the NEB and are referred to as the technical hearings (MGP Producer Group undated).

5.6.5 Coordination of Technical and Public Hearings

The technical hearings held by the NEB and the public hearings held by the JRP have been coordinated to occur at the same location whenever possible. The hearings are held one after another to enable stakeholders to attend both sets of hearings. A total of 62 NEB hearings and a total of 75 JRP hearings were originally scheduled to occur over a period of 10 months. JRP hearings began on February 14th, 2006 and NEB hearings began on January 25, 2006. NEB hearings concluded in December 2006 (Canada NEB 2007). The deadline for completion of JRP hearings has been extended and a number of additional hearings have been added. By July 11, 2007 the JRP will have held 102 hearings. Four topics (cumulative impacts, sustainability and project contributions, recommendations, and closing remarks) remain to be scheduled (JRP 2007a).

Upon completion of the hearings, the JRP is responsible for preparing a report that includes, but is not limited to:

- a description of the public review process
- a summary of any comments and recommendations received from the public
- rationale, conclusions and recommendations regarding the nature and significance of impacts on the environment including any mitigation measures and follow-up programs

- any other matter as required under the *CEA Act*, *MVRMA* and the IFA (JRP 2004b)

The JRP report will be submitted to the NEB, Responsible Ministers and Responsible Authorities, who will respond to each of the JRP recommendations (*Agreement for an EIR* 2004). The report issued by the Responsible Ministers and Responsible Authorities will be submitted to the NEB panel. The NEB panel will then reconvene for Final Argument, after which it will determine if project approvals and licenses should be granted. The NEB panel will consider the outcomes of the technical hearings, the JRP report and the report issued by the Responsible Ministers and Responsible Authorities to make this decision. If the proponents receive regulatory approval, they will base their decision to begin construction upon the terms and conditions of regulatory approvals; the results of engineering, commercial and public consultation activities; and factors such as natural gas markets, fiscal terms and the cost of construction and operation (MGP Producer Group undated). An illustration of this process is included in section 5.7of this chapter

5.6.6 Northern Gas Project Secretariat

The Northern Gas Project Secretariat (NGPS) was established in 2003 through a Memorandum of Agreement (MoA) between the panels and boards with public hearing requirements[1] associated with the regulatory review and approval of the MGP. The NGPS is funded by DIAND, the NEB and CEAA. The core mandate of the NGPS is to provide logistical, communications, information management, administrative and technical support to the hearing processes.

As part of its logistical role, the NGPS provides services related to transportation and accommodation, transcription and translation of hearings. The NGPS also manages the delivery of all required communications and public awareness support, including announcements, media relations and public/ community involvement activities. This

[1] The NEB, the Mackenzie Valley Land and Water Board, the NWT Water Board, the Mackenzie Valley Environmental Impact Review Board, The Inuvialuit as represented by the Inuvialuit Game Council, CEAA and DIAND

support includes the design, translation, production, printing, publication and coordination of all communications products (MoA for NGPS 2003).

As part of its information management role, the NGPS has created a coordinated information management system that serves as a single window for MGP-related information for stakeholders. Finally, as part of its administrative and technical support role, the NGPS develops and implements plans to access and provide general administration services to fulfil financial accountability and human resource management requirements. The NGPS also secures and coordinates technical support for the NEB panel and the JRP (MoA for NGPS 2003). The NGPS has offices in Inuvik and Yellowknife, as well as two regional offices, staffed on a part-time basis, in Norman Wells and Fort Simpson (NGPS nd).

5.6.7 Supra-Regulatory Agreements

Impact Benefit Agreements, Participation Agreements, Environmental Agreements and Access and Benefits Agreements are contractual agreements that are often negotiated between project proponents and Aboriginal communities in northern Canada. Socio-economic agreements are usually negotiated between project proponents and the government of the NWT. The specific provisions contained in all of these agreements differ slightly but typically contain a range of physical, cultural, social and economic provisions that seek to mitigate negative impacts and maximize local benefits from resource development projects (O'Faircheallaigh and Corbett 2005). For simplicity, the term "supra-regulatory agreements" will be used in this report to describe all agreements such as these that address distributional equity, are typically used alongside the regulatory review and approval process, and whose form and substance are not explicitly prescribed in legislation (Galbraith, Bradshaw and Rutherford 2007).

There are a variety of reasons why proponents, governments and Aboriginal communities may be motivated to negotiate supra-regulatory agreements. In some cases, these agreements are mandatory. For example, pursuant to section 10 of the IFA, a developer must negotiate a Participation Agreement with the Inuvialuit Land Administration (ILA)

before exercising their right of access to Inuvialuit lands. Similarly, section 77 of the *MVRMA* states that land and water boards may not issue, amend or renew a licence unless the applicant and the First Nation enter into an agreement to compensate the First Nation for any loss or damage resulting from any substantial alteration to the quality, quantity or rate of flow of waters. Supra-regulatory agreements may also be a necessary condition of approval for specific projects. For example, the Minister of Indian Affairs and Northern Development required "satisfactory progress" on negotiations for supra-regulatory agreements before final approvals for the Ekati Diamond mine in the NWT were granted (O'Faircheallaigh 2006).

In regions where supra-regulatory agreements are not required, proponents may be motivated to negotiate one in order to be viewed as socially and environmentally responsible (Sosa and Keenan 2001). They may also see supra-regulatory agreements as a method of addressing local needs and concerns, thereby ensuring community buy-in. This is financially important because ignoring local interests can increase resentment towards the proposed project and may lead to protests, litigation, and sabotage of facilities and equipment (Hipwell et. al 2002). Proponents do not want to see a project that is technically and financially feasible get stymied by social concerns, especially if large capital investments have already been made (Shanks and Lopez 2006).

Finally, northern resource development projects are often in regions that are sparsely populated and difficult to access. Supra-regulatory agreements typically include provisions for education and training programs, some of which are funded by the federal and/or provincial government. Thus, another motivation for negotiating supra-regulatory agreements is to secure a local labour force at a reasonable cost (Sosa and Keenan 2001). All of these positive benefits increase shareholder confidence and increase investment in the project (Shanks and Lopez 2006).

Ideally, supra-regulatory agreements enable Aboriginal communities to assert their rights and title, maximize the potential benefits of resource development projects, and minimize

negative impacts. The agreements also have symbolic importance because of their recognition of Aboriginal authority within their territory (Shanks and Lopez 2006).

Supra-regulatory agreements provide a legally binding way to address local concerns and ensure local benefits such as employment and training programs, economic development and business opportunities, social, cultural and community services, environmental protection and equity payments (Dreyer and Myers 2004). The revenue arising from supra-regulatory agreements is often used to finance much-needed social services, which provides communities with autonomy over their spending, and helps to build organizational abilities and capacity for self-governance (O'Faircheallaigh 2004). For these reasons, supra-regulatory agreements are an important way for many under-funded Aboriginal communities to improve their situations. Supra-regulatory agreements are discussed further in section 6.2.5 of this report.

5.7 Review of Decision-Making

This section reviews the decision-making steps in the regulatory review and approval process for the MGP. The regulatory review and approval process contains two separate hearing processes. The JRP facilitates environmental and socio-economic hearings and the NEB facilitates technical hearings.

Upon conclusion of the environmental and socio-economic hearings, the JRP will prepare a report that summarizes the social, cultural, economic and environmental issues raised during the process. This report will contain a list of recommendations and will be submitted directly to the NEB panel as well as the Responsible Ministers designated under section 135 of the *MVRMA* and the Responsible Authorities designated under subsection 37[1.1] of the *CEA Act* (*Cooperation Plan* 2002).

The Responsible Ministers and Responsible Authorities must accept, ask for clarification on, or reject each of the recommendations in the JRP report, with the approval of their cabinets. The Responsible Ministers and Responsible Authorities will then submit their response to the JRP report to the NEB panel. The NEB panel will then reconvene for a

final argument, after which the NEB will decide whether the MGP is in the public interest.

If the NEB decides the project is in not in the public interest, the NEB will not issue a certificate. This decision is final and the federal Cabinet cannot override it. If the NEB decides the project is in the public interest, the NEB's decision needs to be approved by the Government-in-Council before the NEB can issue a certificate. If the Government-in-Council approves the NEB decision to issue a certificate, the NEB will issue the certificate as well as the terms and conditions of regulatory approval. Terms and conditions will be based on the JRP report, the Responsible Ministers and Responsible Authorities response to the JRP report, as well as the outcomes of the technical hearing process.

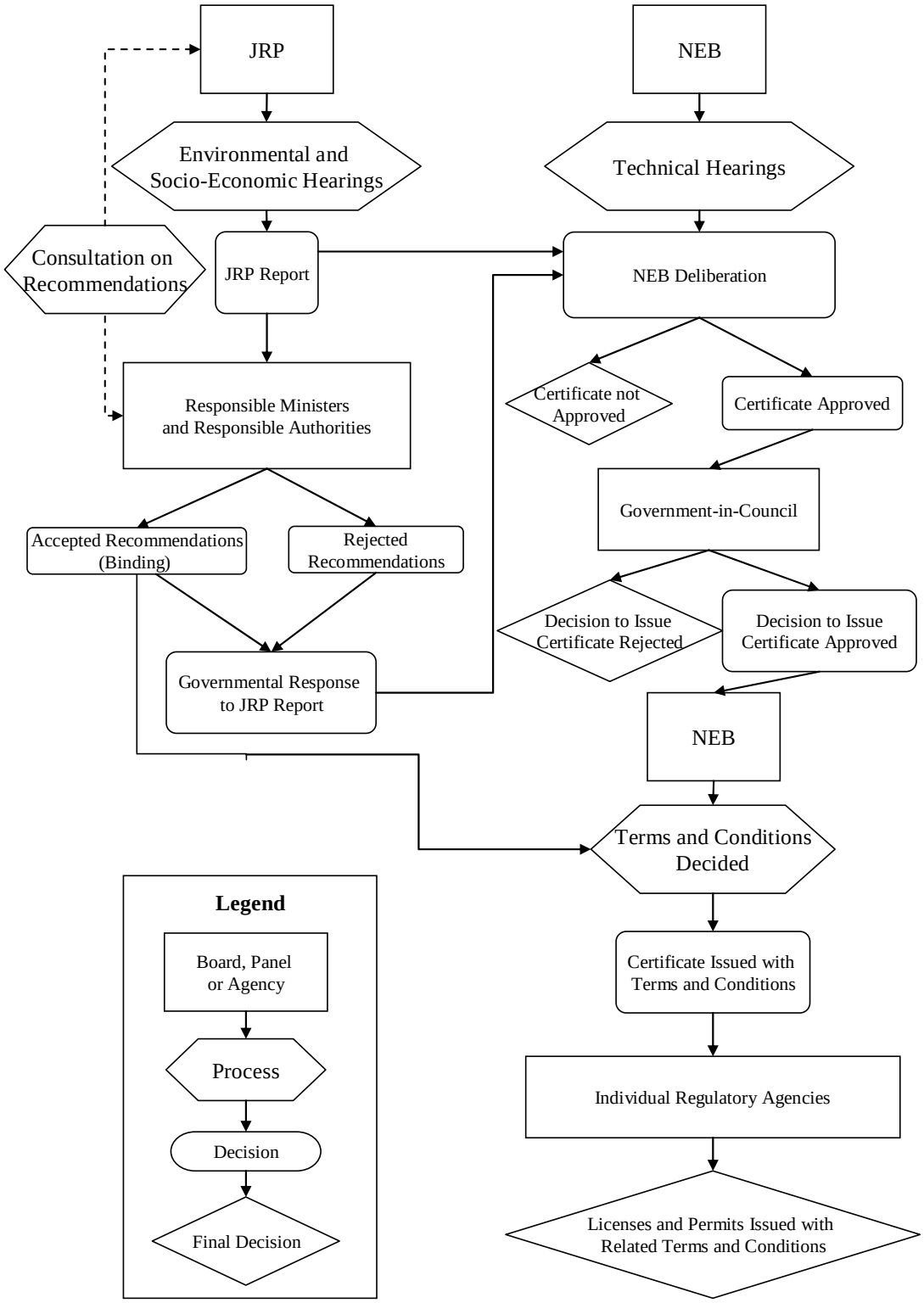
Individual regulators are obliged to act in conformity with the NEB recommendations that are relevant to their mandate (*Coordination Agreement* 2004, 5). This obligation is in accordance with subsections 136(2) and 137(3) of the *MVRMA*, which state that a First Nation, local government, regulatory authority, or department or agency of the federal or territorial government shall act in conformity with any recommendations accepted by the NEB. This obligation is also in accordance with subsection 37(1.1) of the *CEA Act* which states that Responsible Authorities shall act in conformity with the recommendations in environmental impact review reports that have been accepted by the Governor-in-Council (*Agreement for an EIR* 2004). The individual regulators that will be obliged to act in conformity with the approval conditions are:

- the Inuvialuit Land Administration and Inuvialuit Land Administration Commission
- the NEB
- the NWT Water Board
- the Mackenzie Valley Land and Water Board
- the Gwich'in Land and Water Board
- the Sahtu Land and Water Board

- the Department of Fisheries and Oceans
- the Department of Indian Affairs and Northern Development
- Environment Canada
- The Government of the NWT
- Transport Canada (*Coordination Agreement* 2004)

Figure 5.2 provides an illustration of this process.

Figure 5.2 Decision-Making Process



Source: after *Agreement for an EIR* 2004; Cooperation Plan 2002; *Coordination Agreement* 2004

5.8 Summary

There are six federal and two territorial agencies with review and approval processes for the MGP. Environment Canada, the Canadian Environmental Assessment Agency and the National Energy Board all have a lead role in the environmental assessment of the MGP. The Department of Fisheries and Oceans, Department of Indian Affairs and Northern Development, Transport Canada, the government of the Northwest Territories and the Northwest Territories Water Board are all involved in the regulatory approval process for the MGP.

The Inuvialuit Final Agreement, Gwich'in Comprehensive Land Claim Agreement, Sahtu Dene and Metis Comprehensive Land Claim Agreement and Deh Cho Process aim to ensure that Aboriginal interests and opinions are incorporated into the regulatory review and approval process for development projects proposed within the Mackenzie Valley.

The IFA established a number of boards such as the IGC, EISC and EIRB which complement previously existing administrative structures within the ISR. The GCLCA and SCLCA established the MVEIRB and Land and Water Boards that supersede and replace existing administrative structures with boards that ensure Gwich' in and Sahtu interests and opinions are represented in resource management activities. The Deh Cho Process has not yet established Deh Cho boards, but it has led to Deh Cho participation in the Mackenzie Valley Land and Water Board and the MVEIRB. All of the aforementioned agencies were involved in designing the coordinated review and approval process for the MGP.

Coordination of the regulatory approval of the MGP began with the development of the *Cooperation Plan* (2002) between all of the agencies with public review processes that would be triggered by a large pipeline proposal in the NWT. The *Cooperation Plan* (2002) was anticipatory and was developed before the Preliminary Information Package (2003) was submitted by the proponents. A number of other initiatives including the development of the *Coordination Agreement* (2004) and appointment of a JRP were

established after the proponent's submission of the Preliminary Information Package (2003).

A decision about whether to approve the MGP will be made by the NEB once it has considered the JRP report, the Responsible Ministers and Responsible Authorities response to the JRP report, and the outcomes of the technical hearing process. If the NEB decides that the project is not in the public interest, a certificate will not be issued. If the NEB decides that the project is in the public interest, the Governor-in-Council must approve the NEB decision to issue a certificate. The NEB is responsible for determining the terms and conditions of regulatory approval and individual regulatory agencies are responsible for according with these terms and conditions when granting licenses and permits.

An evaluation of the regulatory review and approval process for the MGP is necessary in order to examine whether or not best practice principles have been incorporated.

6 EVALUATION

6.1 Introduction

As outlined in chapter five, comprehensive land claims agreements have transformed the regulatory, socio-political and institutional context for environmental assessment in the NWT (Armitage 2005). This transformation, combined with increasing resource development pressures, has created significant pressure for effective and efficient regulatory review and approval processes. In this chapter, the regulatory review and approval process for the MGP is evaluated based upon the best practice principles developed and described in chapter two. The following system was used to rate incorporation of each principle:

- Fully met = no deficiencies
- Largely met = no major deficiencies
- Partially met = one or two major deficiencies
- Not met = more than two major deficiencies

6.2 Evaluation

6.2.1 Legislated

The regulatory review and approval process needs to be legislated to ensure adherence.

Evaluative Criteria

- Central components of the review and approval process are established in law and are specific, mandatory and enforceable

The *CEA Act*, IFA, *MVRMA* and *NEB Act* legislate the regulatory review and approval framework for the MGP, including decision-making processes and basic information requirements. Specific licensing and permitting requirements are legislated through the *Canada Oil and Gas Operations Act, Canada Petroleum Resources Act, NWT Water Act,*

Fisheries Act, Oceans Act, Territorial Lands Act, Federal Real Property Act, Arctic Waters Pollution Prevention Act, Canadian Environmental Protection Act, Migratory Birds Convention Act, Species at Risk Act, Commissioner's Lands Act, Explosives Use Act, Forest Management Act, Public Health Act and the *Safety Act.*

A number of different boards and agencies have statutory responsibilities for administering these Acts. The *Coordination Agreement* (2004) clarifies how the regulatory review and approval process for the MGP is structured to meet the requirements of each Act and reduce duplication.

Aboriginal rights and title for the Inuvialuit, Gwich'in and Sahtu are legislated through the IFA, *Gwich'in Comprehensive Land Claim Agreement* and *Sahtu Dene and Metis Comprehensive Land Claim Agreement*, respectively. Comprehensive land claim agreements are constitutionally recognized and affirmed in section 35 of the *Constitution Act, 1982*, which also recognizes and affirms the rights of Aboriginal people, such as the Deh Cho, who have not signed treaties. Section 35(1-3) states:

1. The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed;
2. In this Act, "aboriginal peoples of Canada" include the Indian, Inuit, and Metis peoples of Canada;
3. For greater certainty, in subsection (1) "treaty rights" include rights that now exist by way of land claims agreements or may be so acquired.

Section 35 of the constitution also confirms that the government has a legal responsibility to protect the existing aboriginal and treaty rights of Aboriginal people. Interpretation of the requirements for fulfilling this responsibility has been left to the courts.

The basic framework for the regulatory review and approval process is established in law through the legislation outlined above. However, specific aspects relating to how and when the process is implemented are discretionary. For example, public involvement is

required by law but provisions for how to effectively involve the public are not legislated. The decision-making process is legislated but decision-making criteria are vague. Requirements for compliance monitoring and enforcement are vague and many penalties for infractions and non-compliance are discretionary. Aboriginal rights are legislated through the *Constitution Act, 1982*, but interpretation of these rights is primarily done through the court system.

In summary, the basic requirements of this principle are met because the central components of the regulatory review and approval process are established in law. A minor deficiency is that much of the legislation contains vague wording and discretion can be used for how and when to apply the process. Therefore, this principle is largely met.

6.2.2 Clear Roles and Responsibilities

Roles need to be clearly identified through legislation and/or legal agreements in order to clarify jurisdiction.

Evaluative Criteria

- Administrative structures and policy clearly outline levels of authority and responsibility
- Jurisdictional overlap is addressed though formal and informal mechanisms

The agencies with environmental assessment responsibilities in the NWT are required, pursuant to their enabling legislation, to take steps to minimize duplication (*Cooperation Plan* 2002). For example, section 40(2.1) of the *CEA Act* and section 141(2)(a) of the *MVRMA* discuss establishment of a Joint Review Panel (JRP) when both acts are triggered. Section 11(15) of the IFA states that the Screening Committee can refer a proposal to a body carrying out the review process if the review process adequately encompasses or will encompass the assessment and review function of the Environmental Impact Review Board for the Inuvialuit Settlement Region.

As outlined in chapter five of this report, coordination of the regulatory review and approval process for the MGP began with the development of the *Cooperation Plan for the Environmental Impact Assessment and Regulatory Review of a Northern Gas Pipeline Project through the NWT* (the *Cooperation Plan*). The *Cooperation Plan* (2002) was developed by the chairs of the boards and agencies responsible for assessing and regulating energy developments in the NWT. It outlines how the chairs should coordinate their response to any proposals to build a major natural gas pipeline through the NWT and includes preliminary steps for:

- establishing a joint environmental impact assessment process that meets the requirements of the *CEA Act*, *MVRMA* and IFA
- coordinating the environmental impact assessment and regulatory hearings
- developing *Consolidated Information Requirements* for the regulatory review and approval process
- sharing of technical support resources
- developing a plan public for involvement

These preliminary steps are elaborated upon in the *Consolidated Information Requirements* (2002), Plan for Public Involvement (2003), *Agreement for an EIR* of the MGP (2004) and the *Coordination Agreement* (2004).

The *Consolidated Information Requirements* guides potential pipeline proponents through the process of collecting and analyzing baseline environmental and socio-economic data and technical information required for regulatory applications and preparation of an EIS. The *Plan for Public Involvement* outlines and communicates measures that will be taken to make the regulatory review and approval process participative. The *Agreement for an EIR of the MGP* clarifies the mandate, appointment, reporting and decision-making requirements of the JRP. The *Coordination Agreement* identifies the parties with regulatory responsibilities for the MGP and describes how the regulatory reviews of said parties will be coordinated. The *Coordination Agreement* also clarifies how recommendations from the JRP process will be integrated into the regulatory hearing process and final decision-making process. The Mackenzie Valley

pipeline office has coordinated the territorial government's planning and response related to the MGP.

In summary, this process contains two major strengths:

- levels of authority and responsibility are clearly outlined through plans, agreements and legislation
- the plans, agreements and legislation clearly identify where jurisdictional overlap exists and explain how it will be addressed

Furthermore, the *Cooperation Plan* (2002) and *Consolidated Information Requirements* (2002) show proactive methods of clarifying roles and responsibilities of both the regulatory agencies and the proponents. There are no major or minor deficiencies identified for meeting this principle. Accordingly, this principle is fully met.

6.2.3 Rationale Assessed

Requirements to examine the purpose of, need for, and alternatives to a project are one of the main methods of ensuring that socio-economic and environmental considerations are integrated into the early stages of project planning.

Evaluative Criteria

- Procedures for generating and evaluating project alternatives are comprehensive, transparent, systematic and explicit

Pursuant to section 16 of the *CEA Act* and section 117 of the *MVRMA*, every environmental assessment of a proposed undertaking must include a consideration of the need for, purpose of and alternative means of carrying a project out. Accordingly, the proponents are required to examine the need for[2], purpose of[3], and alternatives means of carrying out[4] the MGP. For example, alternatives for facility siting and routing, methods

[2] defined as "the problem or opportunity that the project is intending to solve or satisfy" (ToR 2004, p. 17)
[3] defined as "the fundamental rationale for the project" (ToR 2004, p. 17)
[4] defined as "technically and economically feasible ways that the project can be carried out" (ToR 2004, p. 17)

of transporting material and personnel, and timing and scheduling of each phase of the MGP have to be identified and evaluated (ToR 2004, 18). The preferred alternatives have to be selected based on "clearly identified criteria, supporting information and analyses" (ToR 2004, 18). The proponents are required to discuss how community knowledge or vision of the future is considered and how communities are involved in the identification and selection of alternative means of developing the project (ToR 2004, 18).

The proponents are also required to examine alternatives to the project[5]. They are required to discuss major positive and/ or negative environmental, social, cultural, economic and technical aspects of alternatives considered, as well as the criteria used to identify alternatives (ToR 2004, 17). Despite this requirement, the EIS only contains a brief discussion of alternate pipeline routes and does not contain a comprehensive evaluation that compares the benefits and drawbacks of the MGP with those of other potential or proposed projects that fulfil similar needs and purposes. Such an assessment is obviously beyond the scope of project proponents and should be conducted by the government. There are no provisions for this type of comprehensive rationale assessment in regulatory review and approval processes in Canada, but similar provisions are in place in other jurisdictions. For example, the U.S. National Environmental Policy Act recognizes that environmental assessment should encourage full and open discussion of economic alternatives (Nikiforuk 1997).

In summary, the regulatory review and approval process requires proponents to generate and evaluate the purpose of, need for and alternatives to the project in a transparent, systematic and explicit way. However, two major deficiencies remain:

- the *CEA Act* and *MVRMA* only require rationale assessments be *considered.* Outcomes of rationale assessments are not a fundamental factor in the decision-making process, thus there is no guarantee that outcomes will actually be incorporated into final decisions

[5] defined as "functionally different ways to meet the needs and purpose of the project" (ToR 2004, p. 17)

- there is no provision in the regulatory review and approval process that requires someone other than the proponents to conduct a comprehensive evaluation of competing projects to identify the project or combination of projects that maximizes the public interest

Therefore, this principle is only partially met.

6.2.4 Participative

Collaborative stakeholder engagement results in mutual learning, better analysis of proposals, more sustainable interventions, and greater public acceptance and support of regulatory decisions.

Evaluative Criteria

- Regulatory requirements and guidelines ensure collaborative, sustained and effective public notification, information exchanges and involvement

Public participation is a requirement of the regulatory review and approval process in the NWT. One of the purposes of the MVEIRB is to ensure that the concerns of Aboriginal people and the general public are taken into account in preliminary screening, environmental assessment and environmental impact review of project proposals (*MVRMA* s. 114[c]). Both the *MVRMA* (s. 117[2][c]) and the *CEA Act* (s.16[1][c]) require consideration of all public comments received in accordance with associated acts and regulations.

A Plan for Public Involvement (PPI) was developed by the Regulatory Chairs Committee in 2003. The PPI was developed to ensure the regulatory review and approval process would:

- comply with the requirements of land claim agreements, interim measures agreements and laws
- be sensitive to the way that people of different cultures communicate
- include opportunities to provide and consider traditional and local knowledge

- include people potentially affected by the pipeline
- provide ways to make it easy for them to participate
- allow enough time for participation to occur (p. 6)

As outlined in chapter 5.6.3, the JRP is comprised of seven members nominated by the agencies responsible for implementing the *Canadian Environmental Assessment Act*, the *Inuvialuit Final Agreement* and the *Mackenzie Valley Resource Management Act* (JRP undated). The JRP for the MGP is unique in that members were appointed for their combined knowledge, experience and connection to northern communities, not solely for their technical expertise. Having a variety of interests represented on the JRP increases the likelihood that the JRP will accurately identify and evaluate issues of importance to stakeholders. The members of the JRP have also implemented a number of strategies consistent with the PPI to ensure sustained and effective public notification, information exchanges and involvement.

As outlined in chapter five, the federal Minister of the Environment, the Chair of the Inuvialuit Game Council, the Chair of the Mackenzie Valley Environmental Impact Review Board and the JRP encouraged public involvement in developing the ToR, reviewing the EIS, and participating in the hearing process. Funding was allocated for each of these activities through a funding program established by the federal government.

A funding committee comprised of five individuals with experience in northern environmental assessment who were independent of the project proponent and the JRP administered the funding program. They were responsible for allocating funding in a way that brought a diversity of perspectives to the attention of the JRP and fairly represented the various regions and areas of interest. To be eligible, applicants had to demonstrate an interest in the environmental and/or socio-economic impacts of the MGP and show that a representation of their interests would contribute to the JRP investigation (Canada CEAA 2004a). The funding committee evaluated applications by sequentially applying the following considerations:

- eligibility of the applicant to receive funding (see following paragraph)

- the contribution that the applicant would make to the review of the draft ToR for the EIS
- specific funding requests contained in each proposal (Canada CEAA 2004a)

Individuals, Aboriginal organizations and incorporated not-for-profit organizations were eligible for funding if they could demonstrate that they met at least one of the following criteria:

- had a direct, local interest in the MGP, such as living or owning property in the project area
- had community knowledge or traditional knowledge relevant to the environmental assessment
- planned to provide expert information relevant to the anticipated environmental effects of the project to the JRP (Canada CEAA 2005)

For-profit organizations and individuals or organizations with a direct commercial interest in the project were not eligible for participant funding (Canada CEAA 2005).

Applicants were able to consider the following expenses for funding:

- travel expenses
- local collection/ distribution of information
- professional fees
- office supplies/ telephone charges
- rental of office space/ meeting rooms
- staff salaries
- general media advertising/ promotion
- purchase of information material (Canada CEAA 2005)

The NGPS informed all applicants within ten days of each of the funding allocation decisions. A news release that announced allocation of participant funding was also issued. A report of the funding committee's recommendations and allocations was sent to

all applicants and was posted on the NGPS website and CEAA website (Canada CEAA 2005).

Funding amounts were determined prior to submission of funding applications. The methods used to determine the total amount of funding that would be available are not publicly available. In each phase, the total amount of funding requested exceeded the amount available (see subsections 6.2.4.1, 6.2.4.2 and 6.2.4.3), which supports the argument that the amount of intervener funding provided to Aboriginal groups is insufficient to enable effective participation in the regulatory review and approval process (O'Faircheallaigh 2006; Wismer 1996).

The amount of funding made available increased with each phase of funding, which could indicate that a greater importance was placed on more visible aspects of public participation, such as participation in hearings, rather than on less visible aspects of project participation, such as in scoping the issues to be included in the EIS. The number of applicants also increased for each phase of the funding program, which could reflect increased awareness of the potential impacts of the project as it proceeded through the regulatory review and approval process.

Public involvement in developing the ToR, reviewing the EIS and participating in the hearing process is described in the following subsections.

6.2.4.1 Terms of Reference

On June 3, 2004, the federal Minister of the Environment, the Chair of the Inuvialuit Game Council and the Chair of the Mackenzie Valley Environmental Impact Review Board issued a draft ToR for the EIS of the MGP (EIS 2004). The draft ToR was available for public comment and review for approximately six weeks. Funding for participation in the review was announced approximately six weeks before the draft ToR was issued (NGPS 2004).

Twenty-two applications with a total request for $1,384,600 were received by the funding committee (Canada CEAA 2004a). The funding committee allocated a total of $116,515 to 16 of the applicants (see appendix A for funding details). Public comments and feedback about the draft ToR were incorporated into the final ToR, which was issued to the proponent by the federal Minister of the Environment, the Chair of the Inuvialuit Game Council and the Chair of the MVEIRB on August 18, 2004, the same day that the JRP was assigned (JRP undated).

Public participation in developing and reviewing the ToR is important because the ToR outlines the scope of the issues that are included in the EIS. The ToR also outlines basic public participation requirements for the EIS. For example, the ToR requires the proponents to outline public engagement activities utilized while developing the EIS, and also requires proponents to describe how key issues are identified, reported and addressed (ToR 2004,18).

6.2.4.2 Environmental Impact Statement

The proponents submitted the EIS in October 2004 (MGP Producer Group undated). The JRP was responsible for evaluating the EIS in terms of its adequate fulfilment of the ToR. The JRP sought out public opinion by making copies of the EIS available for public review and by hosting a conference about the EIS (JRP 2005a).

On August 25, 2004, CEAA and the MVEIRB announced that up to $380,000 would be allocated to assist the public in preparing for and participating in the analysis of the adequacy of the EIS submitted by the proponent (Canada CEAA 2004b). Thirty-six applications with a total request for $3,177,843 were submitted to the funding committee, who approved part of the funding requests for 19 of the applications (see appendix B).

The EIS was reviewed for approximately one year, during which the JRP made 21 requests to the proponents for additional information (JRP 2005a). On October 7, 2005 the JRP determined that the EIS contained sufficient information to proceed to the public hearing phase of the environmental impact review (JRP 2005a).

6.2.4.3 Hearings

Three types of hearings are being held during the regulatory review and approval process for the MGP: community, general and technical. At community hearings, participation of local people is given priority (JRP 2005b). These hearings are less formal and written submissions from speakers are not required (JRP 2005b).

General hearings provide opportunities for organizations, businesses or individuals to make presentations to the JRP on any aspect within the scope of the review (JRP 2005b). Registration with the JRP is requested 30 days before the hearing, and 15 written copies of the presentation need to be submitted to the JRP at least 10 days before the scheduled presentation (JRP 2005b).

Technical hearings enable experts to present on specific topics chosen in advance by the NEB (JRP 2005b). Only the proponents and experts are permitted to present at technical hearings. Technical hearings are held under the authority of the NEB.

The government of Canada announced that up to $1,690,485 in funding would be available to help fund public participation in the JRP hearings (Canada CEAA 2006). The deadline for interested parties to submit applications for participant funding was November 30, 2005 (Canada CEAA 2006). The funding committee received a total of 38 applications, with a total request for $3,795,793 (Canada CEAA 2006). Available funding was divided amongst 35 successful applicants (see appendix C).

6.2.4.4 Translation and Dissemination Services

The *CEA Act*, the IFA and the *MVRMA* do not require environmental assessment documents or proceedings be translated into Aboriginal languages. The MGP passes through the traditional territory of the Inuvialuit, the Gwich'in, the Sahtu and the Deh Cho. Translation of key documents and proceedings is an important requirement for public engagement in the regulatory review and approval process.

The JRP has stated that Aboriginal language interpretation services will be provided at the hearings as appropriate, determined by consultation with the representative Aboriginal nations in each region (JRP 2005b). Key documents or sections of key documents provided by the proponent will also be translated into Aboriginal and French languages. The JRP determines if the translated documents should be provided in audio and/or visual or written form (Canada CEAA 2004c).

All rules of procedure, public notices for meetings and hearings, and decision statements issued by the JRP will be available in English, French and Aboriginal languages, and will be available in audio and/or visual form. The JRP tries to ensure that all documents are written in plain language appropriate for interpretation by the general public (Canada CEAA 2004c). This service exceeds the mandated requirements of the *CEA Act* and is considered innovative and unique when compared to the majority of environmental assessments that occur in Canada.

As outlined in chapter 5.6.6, the Northern Gas Project Secretariat (NGPS) was established in 2003. The core mandate of the NGPS is to provide logistical, communications, information management, administrative and technical support to the regulatory review and approval process for the MGP. As part of its information management role, the NGPS has created a coordinated information system that serves as a single window for MGP-related information for stakeholders, which greatly increases accessibility of information.

In summary, there are a number of strengths with the mechanisms for involving stakeholders in the regulatory review and approval process for the MGP:

- the members of the JRP represent a variety of interests and have gone to great lengths to ensure sustained and effective public notification, information exchanges and involvement
- stakeholders were involved in key phases of the review process

- funding for public involvement was made available for each of these phases and was well-advertised. There was a large discrepancy between the amount of funding that was available and the amount requested, but measures were taken to ensure that funding allocation decisions were made transparently and that all interests received some funding
- the NGPS and the JRP ensure that project information is available in the necessary languages and formats and is communicated to stakeholders

Despite these strengths, two major deficiencies remain:

- there is no provision to ensure that stakeholder values, objectives and interests are reflected in final project decisions. For example, stakeholders are not involved in determining decision-making criteria. While the JRP must report the outcomes of the hearing process to the Responsible Ministers and Responsible Authorities, which of the outcomes are accepted or rejected is discretionary
- the regulatory review and approval process is not collaborative, it is based on a quasi-judicial hearing process which is highly formal, based on adversarial proceedings, and dominated by technical discourse (O'Faircheallaigh 2006). A process such as this does not maximize mutual learning, analysis of proposals, or public acceptance and support of regulatory decisions (Van Hinte et al. 2007)

Accordingly, this principle is only partially met.

6.2.5 Distributional Equity Required

Review and approval processes need to promote distributional equity in order to advance social and environmental sustainability goals.

Evaluative Criteria

- Regulatory review and approval process contains a legal obligation to provide compensation to those negatively affected by a project and ensure that project benefits are distributed equitably

One of the stated purposes of the *CEA Act* is to promote sustainable development (s. 4[b]). Sustainable development is also incorporated into the guiding goals and principles of the IFA and *MVRMA*, which state that the environmental impact review should have regard for the following:

- protecting the environment from significant adverse impacts of proposed developments
- protecting the social, cultural and economic well-being of residents and communities
- preserving the cultural identity and values of Aboriginal people within a changing northern society
- enabling Aboriginal people to be equal and full participants in the development of the economy and society (ToR 2004)

Accordingly, the ToR (2004) states that contribution to sustainability, use and respect for traditional knowledge, recognition of land claims and treaties, recognition of diversity and the precautionary approach should provide context for the regulatory review and approval process. The proponents are instructed to recognize the following:

- potential impacts of the project in relation to the social, economic, cultural and environmental goals and values of affected communities, the North and the rest of Canada
- capacity of natural systems to maintain their structure and functions and to support indigenous biological diversity and productivity
- capacity of the social and economic systems of the human environment to achieve, maintain or enhance conditions of self-reliance and diversity
- capacity of human environments, including local and regional institutions, to respond to and manage externally induced change
- attainment and distribution of lasting and equitable social and economic benefits from projects
- rights of future generations to the sustainable use of renewable resources

- protection and conservation of wildlife and the environment for present and future generations (p. 4)

Even though the majority of the above statements imply that distributional equity is a necessary component of sustainable development, distributional equity is not clearly required through the regulatory review and approval process. The *CEA Act* does not contain any provisions for distributional equity. The NEB does not have jurisdiction over compensation matters (Canada NEB 2003) but may, pursuant to s. 5.2(1) of the *Canada Oil and Gas Operations Act* (*COGOA*), require a proponent to submit a benefits plan for ministerial approval before a development plan is approved or any work or activity is authorized. A benefits plan typically contains provisions for employment of individuals and manufacturers, consultants, contractors and service companies.

The IFA, *MVRMA* and *Deh Cho Interim Measures Agreement* (*IMA*) contain some provisions for compensation and benefits for Aboriginal communities. Broader economic development considerations are often addressed in socio-economic agreements, which are not legislated and are negotiated between the government of the NWT and the project proponent.

Pursuant to section 10 of the IFA, any developer must pay the Inuvialuit fair compensation for access to Inuvialuit lands, for damage to such lands and for any diminution of the value of their interests in their lands. A developer must also negotiate a Participation Agreement with the Inuvialuit Land Administration (ILA) before exercising their right of access. Participation Agreements set out the rights and obligations of the parties respecting the activity for which the access is being granted. Participation Agreements cannot include royalty payments but tend to include specific terms and conditions related to:

- costs associated with any ILA inspection of the development work sites and the nature and scope of such inspection
- wildlife compensation, restoration and mitigation
- employment, service and supply contracts

- education and training
- equity participation or other similar types of participatory benefits

The procedures and timetables for concluding Participation Agreements are determined by the federal government but the federal government does not need to be involved in negotiating the agreement.

Section 77 of the *MVRMA* contains compensation provisions for the Gwich'in and Sahtu. The Gwich'in Land and Water Board or the Sahtu Land and Water Board may not issue, amend or renew a licence unless the applicant and the First Nation enter into an agreement to compensate the First Nation for any loss or damage resulting from any substantial alternation to the quality, quantity or rate of flow of waters. The Land and Water Boards determine the compensation payable in respect of the proposed use of waters or deposit of waste after considering the following:

- the impact on the First Nations's use of any waters which are on, flowing though or adjacent to its First Nation lands
- the impact on any lands, taking into account the cultural or special value of those lands to the First Nation
- the nuisance or inconvenience to the First Nation, including noise, that may result on First Nation lands
- the effect on wildlife harvesting carried out by the First Nation
- any other factor that the Board considers relevant in the circumstances (s. 79[1-2])

The Land and Water Boards are responsible for specifying the timeframe within which compensation agreements must be entered into (*MVRMA*, s. 91). There is nothing in the *MVRMA* that requires maximization of benefits for local communities.

The *IMA* also contains some provisions for compensation and benefits. Pursuant to section 42 of the *IMA*, a benefits plan is required for any work, activity or development that requires the authorization of approval of the NEB under the *Canada Oil and Gas Operations Act* in the Deh Cho territory. The benefits plan is submitted by the operator

for the approval of the Minister of IAND and may contain provisions for consultation, maximization of opportunities for employment, training, the supply of goods and services, and compensation for damages relating to resource harvesting (IMA 2001, s. 42a).

In all of these supra-regulatory agreements, community involvement can be overridden if negotiations take too long. This is of particular concern for the Inuvialuit Participation Agreements and the Deh Cho benefits plans because timelines for negotiation are not determined by affected communities, they are determined by the federal government.

Socio-economic agreements are contractual agreements between governments and proponents. Socio-economic agreements typically contain commitments for employment, training and business opportunities and include commitments with respect to community and cultural well-being. They are not legislated, but they are becoming a de facto condition of approval for projects in the NWT (Canada INAC 2007). The government of the NWT and the proponents of the MGP signed a socio-economic agreement in January, 2007. The public was not involved in reviewing the document before it was signed but the document has been released publicly (Alternatives North 2007).

As outlined in chapter five of this report, there are a number of benefits associated with supra-regulatory agreements. Proponents may benefit by being viewed as socially and environmentally responsible; increasing community buy-in and certainty of regulatory approval; and/ or securing a work-force for the project once it is approved (Sosa and Keenan 2001). Aboriginal communities may benefit by asserting their rights and title, maximizing potential benefits of resource development projects and minimizing negative impacts (Shanks and Lopez 2006).

In spite of these benefits, both resource developers and Aboriginal communities have expressed concerns about the equity of supra-regulatory agreements. Aboriginal communities have fewer financial, technical and human resources than project proponents (Shanks and Lopez 2006). Although communities are often reimbursed for negotiation expenses by the government or by project proponents, they may not have the

ability to pay for up-front costs (Sosa and Keenan 2001). Similarly, implementing and enforcing a supra-regulatory agreement is extremely expensive and may drain resources from the community (Sosa and Keenan 2001). In addition, community leaders are often consumed by associated information-gathering and negotiation processes and become unable to focus on other important issues (Sosa and Keenan 2001).

Resource developers already pay resource royalties and taxes and argue that it is inequitable that they must contribute additional monies to social programs. They argue that doing so enables the government to off-load public sector responsibilities onto the private sector (Shanks and Lopez 2006). This issue is exacerbated by the fact that because of historic under-funding and neglect, many Aboriginal communities perceive supra-regulatory agreements as their only opportunity to secure socio-economic opportunities (Shanks and Lopez 2006). Resource developers are further frustrated by the "veto power" that they perceive Aboriginal communities have, which they argue gives Aboriginal communities unfair leverage during negotiations.

Supra-regulatory agreements are usually confidential. The parties can discuss general aspects of the agreements with third parties but cannot go into specific details (Sosa and Keenan 2001). Confidentiality clauses are contentious because they significantly limit the extent to which industry, the public and Aboriginal communities can learn from each other's experience (Sosa and Keenan 2001). Confidentiality clauses also limit public and government awareness of what is contained in the agreement, which is controversial given that supra-regulatory agreements are negotiated alongside the regulatory review and approval process.

In summary, the regulatory review and approval process for the MGP provides for more equitable outcomes than would be required in the regulatory review and approval process in other jurisdictions. Major strengths of the process are as follows:

- the Inuvialuit, Gwich'in, Sahtu and Deh Cho all have a legal right to compensation through the IFA, *MVRMA* and *Deh Cho IMA*

- the IFA and *Deh Cho IMA* require maximization of local benefits
- the ToR (2004) makes several references to the importance of distributional equity in terms of achieving environmental, social, cultural and economic sustainability

However, two major deficiencies remain:

- the *MVRMA* does not contain provisions for maximizing local benefits
- the process of negotiating supra-regulatory agreements raises equity questions. For example, community involvement in compensation negotiations can be overridden if negotiations take too long. There is no legal requirement for negotiation of a socio-economic agreement. All supra-regulatory agreements except socio-economic agreements are confidential, and even socio-economic agreements are only released publicly after they have been signed

Accordingly, this principle is only partially met.

6.2.6 Adapted to Context

A context-oriented approach is more inclusive of affected communities and may improve public confidence in the process and its outcomes.

Evaluative Criteria

- Legal and fiduciary obligations to Aboriginal people fulfilled
- Traditional and local knowledge fully incorporated

Context-oriented regulatory review and approval processes are adapted to fit within local cultural, social, economic and political dimensions. Regulatory review and approval processes in northern Canada must be adapted to meet legal and fiduciary obligations to Aboriginal people. In the NWT, this requires meeting the terms and conditions of comprehensive land claim agreements, interim measures agreements, and honouring the constitutionally enshrined duty to consult and accommodate Aboriginal people affected by a proposed project.

The *MVRMA* and IFA also state that the regulatory review and approval process should fully incorporate local and traditional knowledge[6]. In order to do this, it is necessary to adopt strategies to overcome language barriers and differences in preferred methods of communication, which have tended to reduce engagement of Aboriginal people during environmental assessment in the past (Armitage 2005b; Wismer 1996; Mulvihill and Baker 2001).

6.2.6.1 Legal and Fiduciary Obligations

As outlined in section 6.2.1 of this chapter, Aboriginal and treaty rights are recognized and affirmed in s. 35 of the *Canadian Constitution Act, 1982*. The Crown has an implicit obligation to contribute positively to the realization of these rights and refrain from suppressing them. The fiduciary relationship between the Crown and Aboriginal people requires the Crown to act with the utmost good faith and care in the interests of the Aboriginal people affected by its actions.

Pursuant to section 35 of the constitution, the courts have established that the Crown has a duty to consult and accommodate Aboriginal people before infringing on their Aboriginal and treaty rights. In *R. v. Sparrow* [1990], the court ruled that the government needs a valid objective to infringe on Aboriginal rights. The Supreme Court's *Delgamuukw* [1997] decision clarified and expanded upon the government's "duty to consult" before infringing on these rights. In the *Haida* [2004] and *Taku River Tlingit* [2004] cases, the Supreme Court unanimously determined that the duty to consult applies to both provincial and federal governments, and ruled that adverse impacts on potential Aboriginal title claims must be considered during consultations (Henderson 2006). In *Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage)* [2005], the Supreme Court ruled that the duty to consult also applies on lands that have been surrendered through treaties (Qureshy 2006).

[6] traditional knowledge refers to a broad base of knowledge held by individuals and collectively by communities that may be based on observation and experience. It may be acquired through experience, observation, from the land or from spiritual teachings. Passed from one generation to another through oral and/or written traditions, it is a dynamic, substantive, and distinct living knowledge (ToR 2004, p. 9)

The traditional territory of the Dene Tha' First Nation (the Dene Tha') extends into the NWT and overlaps with that of the Deh Cho. Therefore, the federal government has a clear duty to consult and accommodate the Dene Tha' with respect to decisions regarding the MGP. However, the federal government through the Minister of Environment, the Minister of Fisheries and Oceans, the Minister of Indian and Northern Affairs Canada and the Minister of Transport (the Ministers) breached this duty. The Ministers included the Dene Tha' in a single media release on June 3 2004 which invited public consultation on the draft ToR for an EIS and JRP agreement, and gave the Dene Tha' a 24-hour deadline to comment on these documents on July 14 2004. The Ministers argued that these actions were sufficiently reasonable to discharge their duty to consult (*Dene Tha' First Nation v. Minister of Envrionment et al.* [2006]).

On November 10, 2006, the Federal Court ruled that the Ministers' actions were insufficient and the federal government breached its constitutionally entrenched duty to consult and accommodate the Dene Tha' (*Dene Tha' First Nation v. Minister of Envrionment et al.* [2006]). The results of this case are discussed in further detail in section 6.2.9 of this chapter. This case exemplifies the value of comprehensive land claim agreements and interim measures agreements, which clearly outline the specific steps that must be taken to fulfil legal and fiduciary obligations to Aboriginal people. For example, section 6.2.2 outlines all the measures that have been taken to ensure that the regulatory review and approval process meets the requirements of the Inuvialuit, Gwich'in and Sahtu comprehensive land claim agreements and the Deh Cho *IMA*.

6.2.6.2 Local and Traditional Knowledge

The *CEA Act* states that "community knowledge and Aboriginal knowledge may be considered in conducting an environmental assessment" (1992, s. 16.1), but no guidance on when or how to gather and incorporate such knowledge is provided. The *MVRMA* improves on the *CEA Act* by stating that "the [MVEIRB] shall consider any traditional knowledge …that is made available to it" (1998, s. 115.1). The MVEIRB provides guidelines for when and how to gather and incorporate traditional knowledge.

The *Guidelines for Incorporating Traditional Knowledge in the Environmental Impact Assessment Process* (the *Guidelines*) were issued by the MVEIRB in 2005. The *Guidelines* identify how traditional knowledge is used in the MVEIRB process and are the first guidelines for incorporating traditional knowledge into an environmental impact assessment to be issued in Canada (MVEIRB 2005b). The *Guidelines* are written for both project proponents and participants in the review process.

The *Guidelines* and other agreements such as the *Cooperation Plan* (2002) and the *Plan for Public Involvement* (2003) increase the likelihood that traditional and local knowledge will be effectively incorporated into the regulatory review and approval process. For example, two of the guiding principles in the *Cooperation Plan* (2002) are the need to develop a "made in the north" process and the need to enhance public participation. The *Plan for Public Involvement* (2003) ensures that the review and approval process is sensitive to communication differences, and incorporates and shows respect for traditional and local knowledge. Such strategies help overcome language barriers and differences in preferred methods of communication, which have tended to reduce Aboriginal engagement during previous environmental assessments (Armitage 2005b; Wismer 1996; Mulvihill and Baker 2001).

Despite these strategies, challenges remain with effectively incorporating traditional and local knowledge. A fundamental problem is that traditional knowledge is primarily incorporated into the regulatory review and approval process through the EIS, which is developed by project proponents (Armitage 2005b). Although some proponents have good relationships with community members, many do not. Instances of both overt and implicit racism on the part of individuals in the mining industry have been reported and have tainted proponent-community relations in the NWT (Keith 1996). Holders of traditional knowledge are not necessarily comfortable working with proponents, and may be reluctant to share their knowledge with them (Armitage 2005b).

A second challenge with incorporating traditional knowledge is that many elders and other holders of traditional knowledge are only comfortable when communicating orally

in their own languages (Colorado in Ellis 2005). Therefore, they usually participate in review hearings through interpreters. Interpreters must be able to understand relevant technical and scientific fields and then be able to translate the concepts into Aboriginal languages, a problem that is compounded by the fact that there are often no Aboriginal words for concepts such as “eutrophication” or “watershed management”. An outcome of translation difficulties is the oversimplification of complex observations and knowledge (Ellis 2005).

In summary, a number of attempts have been made to adapt the regulatory review and approval process for the MGP to fit within local cultural, social, economic and political dimensions. Strengths include:

- legal and fiduciary obligations to Inuvialuit, Gwich’in, Sahtu and Deh Cho are fully met
- the *Guidelines* and other agreements such as the *Cooperation Plan* (2002) and the *Plan for Public Involvement* (2003) increase the likelihood that traditional and local knowledge will be incorporated into the regulatory review and approval process

However, two major deficiencies remain:

- legal and fiduciary responsibilities to the Dene Tha’ have not been met
- barriers to effective incorporation of traditional knowledge still exist. For example, holders of traditional knowledge may be reluctant to share their knowledge with proponents and complex observations and knowledge may be simplified due to challenges in interpretation

Accordingly, this criterion is only partially met.

6.2.7 Adequate Information

Adequate information helps to identify, predict and manage potential impacts.

Evaluative Criteria

- Adequate scientific, technical, traditional and local information is gathered by objective parties and made available to the public

Adequate information is required by *the CEA Act*, IFA and *MVRMA*. The *CEA Act* states that review panels must ensure that all information required for an assessment is obtained and made available to the public (1992, s. 34). The IFA states that the Inuvialuit Environmental Impact Review Board may recommend further assessment and review if additional information is required (1984, s. 11[24]). The *MVRMA* states that the impacts of proposed developments must receive careful consideration before actions are taken in connection with them, and the concerns of Aboriginal people and the general public must be taken into account in doing so (1998, s. 114).

Accordingly, the need for adequate information is emphasized throughout the ToR (2004). In each section of the ToR, what is considered adequate information is explained and the proponents' responsibilities for providing it are described. For example, in describing potential biological impacts, the proponents are instructed to provide enough information to enable the JRP to understand the nature of potential impacts. In doing so, the proponents have to provide a clear, traceable path of information from baseline conditions through to the identification of potential impacts, mitigation, residual impacts and determination of significance (p. 42).

The *Coordination Agreement* (2004) provides for the establishment of a technical support team to provide technical expertise and specialist advice on an as-needed and as-requested basis during the regulatory review and approval process. The *Coordination Agreement* (2004) specifies the technical team has to be comprised of qualified individuals free from conflict of interest in any of the proceedings and chosen for their specific technical expertise (s. 9).

As outlined in chapter five, the Northern Gas Project Secretariat (NGPS) was established in order to provide logistical, communications, information management, administrative and technical support to the MGP hearing processes. The NGPS has created a

coordinated information management system that serves as a single window for MGP-related information for stakeholders. The NGPS has offices in Inuvik and Yellowknife, as well as two regional offices, staffed on a part-time basis, in Norman Wells and Fort Simpson (NGPS undated).

As outlined in section 6.2.6, section 115.1 of the *MVRMA* requires the MVEIRB to consider traditional knowledge during the environmental assessment process. In 2005, the MVEIRB issued the *Guidelines for Incorporating Traditional Knowledge in the Environmental Impact Assessment Process (the Guidelines)*. The *Guidelines* clarify how traditional knowledge will be used in the environmental assessment process, and describe steps that should be taken by proponents and holders of traditional knowledge to ensure that traditional knowledge is adequately incorporated into the environmental assessment process.

The proponents are responsible for providing the majority of information used in the regulatory review and approval process. This is a common subject of debate related to regulatory review and approval processes across Canada. Critics such as Nikiforuk (1997) argue that enabling proponents to hire their own consultants leads to biased information because consultants will "alienate the environment before they alienate their clients with damning conclusions that could foreclose on future business opportunities" (p. 19). This tendency, combined with a lack of standards, uniform training or professional guidelines for those preparing an EIS, can lead to unreliable predictions, avoidable uncertainties, and an unsound decision making basis (Lawrence 2003; Nikiforuk 1997). A logical recommendation is that an independent third party prepare the EIS and all interested and affected parties be involved in interpretations and decisions arising from the report (Lawrence 2003). However, one major benefit of a proponent-driven EIS is that the proponent has usually invested a significant amount of resources into gathering information prior to preparation of the EIS, so proponent-driven studies may be more efficient than those conducted by a third party.

Regardless of who conducts an EIS, the document should incorporate a discussion of the assumptions used, how and why particular methods were chosen, and different interpretations that can be taken from the studies. Researchers such as Lawrence (2003) and Beder (1993) suggest subjecting methods and reports to peer-review to ensure consistency and quality.

In summary, the information requirements for the regulatory review and approval process for the MGP contain the following strengths:

- the *CEA Act*, IFA and *MVRMA* all state that adequate information is required before decisions on project approval are made
- the ToR (2004) defines what adequate information is
- the NGPS communicates project information to the public
- the *Guidelines* outline the steps for adequately including traditional knowledge in all phases of the environmental assessment process

The regulatory review and approval process also contains one major deficiency:

- the majority of information is provided by the proponents, not an objective party

The issues associated with proponent-driven studies are compounded in northern regions because few areas have been subject to extensive baseline studies (Mulvihill and Baker 2001). Thus, proponents are often expected to fill in information gaps with project-driven studies that may be conducted too quickly to compile adequate information, which may result in inaccurate predictions (Armitage 2005b; Mulvihill and Baker 2001).

Accordingly, this principle is only partially met.

6.2.8 Transparent Decisions

A transparent decision-making process provides a clear, coherent, comprehensive, and defensible basis for decision-makers.

Evaluative Criteria

- Explicit and traceable decision-making process based on clear criteria

As outlined in chapter five of this report, the regulatory review and approval of the MGP contains two public hearing processes. In accordance with the *Cooperation Plan* (2002), the NEB is coordinating a set of technical hearings and the JRP is coordinating a set of environmental and socio-economic hearings. The general topics that each hearing process will include have been clearly outlined but the specific evaluative criteria are vague.

The NEB hearing process includes, but is not limited to, consideration of the following factors:

- the need for the proposed project
- the economic feasibility of the proposed project
- the potential commercial impacts of the proposed project
- the appropriateness of the general routes of the proposed pipelines
- the toll and tariff regulation of the proposed MGP
- the suitability of the design of the proposed project
- the terms and conditions to be included in any approval the NEB may issue
- the appropriateness of the Applicants' public consultation program and the adequacy of Aboriginal consultation
- the ability of the proponents to manage risk and financial liabilities related to the construction, operation and decommissioning of the proposed project
- the appropriateness of the Development Plans for the Taglu, Parsons Lake and Niglintgak fields
- the estimated cost of construction of the Mackenzie Valley Pipeline for the purpose of subsection 5.2(1) of *the National Energy Board Cost Recovery Regulations*
- the reports from the JRP process

- the appropriate tolls, access and tariff provisions for the Mackenzie Gathering System and the methods for resolving disputes on these matters (Canada NEB 2005, Appendix I)

The JRP hearing process includes, but is not limited to, a consideration of the following factors:

- the impact of the project on the environment
- the significance of any such impact
- any comments from the public that are received during the environmental impact review
- measures that are technically and economically feasible and that would mitigate any significant adverse impact of the project on the environment
- the purpose of the project
- the need for the project
- alternatives to the project
- alternative means of carrying out the project that are technically and economically feasible and the impact on the environment of any such alternative means
- the need for any follow-up program in respect of the project, and the requirements of such a program
- the capacity of renewable resources that are likely to be significantly affected by the project to meet existing and future needs (ToR 2004, Appendix 2, 4)

The JRP must issue a report upon completion of their hearing process. The JRP report is submitted to the NEB, Responsible Ministers, Minister of Environment and Responsible Authorities. The report must include, but is not limited to:

- a description of the public review process
- a summary of any comments and recommendations received from the public
- a rationale, conclusions and recommendations regarding the nature and significance of impacts on the environment including any mitigation measures and follow-up programs

- any other matter as required under the *CEA Act*, the *MVRMA* and the IFA (ToR 2004, Schedule 1, s. 4.8)

The Responsible Ministers and Responsible Authorities must consider the recommendations in the JRP report before making any decisions regarding the project. They must accept, ask for clarification on, or reject each of the recommendations in the JRP report, with the approval of their cabinet. The report and the governmental response to it is then filed with the NEB and made available to the public (*Agreement for an EIR* 2004).

The NEB will then reconvene for a final argument, at which point the NEB will decide, based on the evidence, whether or not the MGP is in the public interest and should be approved, as well as any terms and conditions of approval. If the NEB decides the project is in the public interest, the federal Cabinet must approve the NEB decision to issue a certificate of public convenience and necessity. If the NEB decides the project is not in the public interest, no further approval is necessary (Canada NEB 2005). The federal Cabinet cannot override an NEB decision to refuse to issue a certificate of public convenience and necessity.

There are two major strengths to this decision-making process:

- the roles of the parties involved are explicit and clear
- the government must publish a response to each of the JRP recommendations which increases transparency

There are three major deficiencies to this process:

- there are no clear criteria for how recommendations in the JRP report are evaluated by the Responsible Ministers and Responsible Authorities
- the NEB bases its final decision on whether or not the project is in the public interest. This is a vague and undefined term which leaves the NEB a lot of

discretion over whether a certificate for public convenience and necessity should be issued

- there are no criteria provided for how the government would decide whether to approve the NEB decision to issue a certificate nor is there a requirement that the government publish the reasons for its decision

Accordingly, this criterion is not met.

6.2.9 Efficient

Stakeholders can become frustrated with inefficient regulatory review and approval processes typified by unnecessary uncertainties, inconsistencies and delays.

Evaluative Criteria

- Issues and impacts that are likely to be important are identified
- Process is scoped to achieve accepted requirements and objectives within the limits of available information, time, resources and methodology
- Process is not constrained by lengthy appeal processes or unnecessary delays caused by blurred roles and responsibilities or absence of a clear decision-making framework

The federal government spends approximately $40 million on environmental assessment each year (Boyd 2003), and has one of the highest per capita allotments in the world (Wood 1995). Environmental assessment has become big business for government officials, consultants, developers, researchers and academics (Wood 1995). Despite this, or perhaps because of this, misgivings remain regarding the efficiency of the regulatory review and approval process (Lawrence 2003).

The *CEA Act* states that the federal environmental assessment coordinator must ensure that the federal authorities fulfill their obligations under the *CEA Act* in a timely manner (s. 12.2). Likewise, the *MVRMA* specifies that the impact review process must be carried out in a timely and expeditious manner (s. 115). As discussed in section 6.2.2 of this

chapter, these provisions led to the establishment of a coordinated regulatory review and approval process that clarified roles and responsibilities and reduced duplication.

An important aspect of achieving efficiency is proper scoping of the issues that should be included in the regulatory review and approval process. The review and approval process is scoped to meet the requirements of the *CEA Act*, *MVRMA* and IFA. As discussed in sections 6.2.4 of this chapter, issues and impacts that were likely to be important were identified through public involvement in developing the ToR and determining hearing topics.

The proponents were instructed to focus their EIS on those elements of the physical, biological and human environments that could be affected by the MGP or could have an important effect on it, and were recognized as important for physical, ecological, cultural, social or economic reasons. These elements are known as Valued Ecosystem components (VECs). The proponents are responsible for communicating the methods by which VECs were identified and the basis or justification for their selection. For each VEC, the proponents must develop and justify appropriate ecological, social, economic and administrative boundaries (ToR 2004, 35-36).

Timelines were established for the public hearing process and the initial review of the EIS. The *Cooperation Plan* (2002) and *Agreement for an EIR* (2004) allotted four months for the initial review of the EIS and ten months for the public hearing process and submission of the JRP report. No explanation for why this length of time was chosen is given. As outlined in section 6.2.4.2 of this chapter, the EIS was reviewed for approximately one year (JRP 2005a) and the public hearing process will take at least 16 months. Both timelines have been exceeded in order to respond to public concerns. This indicates that original timelines were too ambitious for the complexity of the review and approval process.

One major delay has resulted from improper scoping of the regulatory review and approval process. As outlined in section 6.2.6 of this chapter, the Dene Tha' were excluded from discussions and decisions regarding the design of the regulatory review

and approval process. On November 10, 2006, the Federal Court ruled that the federal government breached its constitutionally entrenched duty to consult and accommodate the Dene Tha' (*Dene Tha' First Nation v. Minister of Environment et al.* [2006]). A resultant court order has prevented the JRP from hearing evidence on matters involving the territory in which the Dene Tha' First Nation have or have asserted Aboriginal or treaty rights. The JRP is prohibited from issuing its final report until otherwise permitted by the court (JRP 2007b).

In summary, the regulatory review and approval process for the MGP is complex. A number of different boards and agencies have overlapping jurisdiction and it is easy to see how the process could be plagued by unnecessary inconsistencies, uncertainties and delays. The process has become more efficient because of the following factors:

- scoping provisions are provided
- a decision-making framework is in place

Despite these strengths, the regulatory review and approval process also contains the following major deficiencies:

- established timelines were too ambitious and have been exceeded
- the Dene Tha' were unjustifiably excluded from discussions and decisions regarding the design of the regulatory review and approval process and a major delay has resulted

Accordingly, this principle is only partially met.

6.2.10 Cumulative Effects Assessed

Some of the worst impacts arise from the combined, incremental effects of numerous activities whose individual impacts are modest.

Evaluative Criteria

- Cumulative effects assessments are completed and linked to broader goals and objectives that balance resource development and economic interests with ecological and socio-cultural sustainability

The NWT Cumulative Effects Assessment and Management (CEAM) Strategy and Framework and the NWT Cumulative Impact Monitoring Program (CIMP) require assessment and management of cumulative effects within the NWT. Both programs examine cumulative impacts to social, cultural, economic, biological and physical environments and incorporate traditional knowledge and science (Canada DIAND 2003).

The NWT CEAM Strategy and Framework was established by DIAND and Environment Canada following the environmental assessment of the Diavik Diamonds Project in December 1999. The purpose of the NWT CEAM Strategy and Framework is to understand and manage the cumulative effects of activities such as mining and oil and gas development and to make recommendations to decision-makers to facilitate the protection of ecological integrity; building of sustainable communities; and responsible economic development within a sound environmental management framework (NWT CEAM Secretariat 2006).

The NWT CIMP is a requirement of the Gwich'in, Sahtu and Tlicho land claim agreements and is addressed in sections 145-150 of the *MVRMA*. The Inuvialuit Game Council has chosen to participate in the NWT CIMP and, as such, the program covers the entire NWT. The NWT CIMP encourages community-based monitoring and community capacity-building; provides resources to fill the gaps in current monitoring activities, reports on the health of the environment, and helps coordinate monitoring and reporting in the NWT (Canada DIAND 2003).

Consideration of cumulative effects is required through the *CEA Act* (s. 16[1]) and the *MVRMA* (s. 117[2]). Accordingly, the JRP must evaluate the cumulative social, economic, cultural, biological and physical impacts of the MGP (*Agreement for an EIR* 2004, schedule 1).

The ToR (2004) sets out the following questions to guide the proponent's assessment of the cumulative effects of the MGP:

- Which are the most appropriate VECs on which to focus the cumulative effects assessment?
- For the selected VECs, will the residual impacts caused by the project act in a cumulative manner with those of other projects, activities or land/water use pressures? Which ones?
- Will the impacts of the project, in combination with these other impacts, measurably change the state, health or sustainability of the VEC? If so, how?
- How can the project's contribution to cumulative impacts be avoided or mitigated?
- What is the significance of the potential cumulative impacts?
- How can and should potential cumulative impacts be managed and monitored? What are the opportunities to manage cumulative impacts? (p. 57).

The ToR requires the proponents to describe the scoping process for the cumulative effects assessment, analysis of cumulative effects, mitigation of potential cumulative effects, significance of cumulative effects, and strategies that will be used to verify the accuracy of cumulative impacts predictions and evaluate effectiveness of mitigation strategies. The proponents are also required to discuss how proposed monitoring programs will be integrated or coordinated with the NWT CEAM Strategy and Framework or the NWT CIMP, or with programs associated with other current or future projects (ToR 2004, 58-59).

In summary, the following aspects of the regulatory review and approval process help ensure that cumulative effects assessments for the MGP are completed and linked to broader goals and objectives:

- The *CEA Act* (s. 16[1]) and the *MVRMA* (s. 117[2]) require consideration of cumulative impacts

- cumulative effects assessments completed by the NWT CEAM Strategy and Framework and the NWT CIMP link in broader goals and objectives that balance resource development and economic interests with social, cultural, economic, biological and physical sustainability

No major or minor deficiencies are identified. Accordingly, this principle is fully met.

6.2.11 Appeal Process

Appeal process ensures that established guidelines, goals or objectives are adhered to and improves credibility.

Evaluative Criteria

- Appeal process is efficient and narrowly defined to eliminate delays to the decision-making process

The Federal Court is Canada's national trial court which hears and decides legal disputes arising in the federal domain, including claims against the Government of Canada, civil suits in federally-regulated areas and challenges to the decisions of federal tribunals. The court has exclusive jurisdiction to review the legality of actions of most federal offices, boards, commissions and tribunals. Most government decisions related to the MGP, such as decisions related to environmental impact assessment, oceans and fisheries, and Aboriginal rights and title can be challenged in the Federal Court (Federal Court 2006). For example, *Dene Tha' First Nation v. Minister of Environment et al.* [2006] was heard by the Federal Court. Some decisions, such as NEB decisions or orders, are subject to review in the Federal Court of Appeal rather than the Federal Court (Federal Court 2006). Applications can be made to appeal all Federal Court decisions in the Federal Court of Appeal (Federal Court of Appeal 2006).

Certain NEB decisions, such as disagreements on compensation offered by a company or appeals by a person aggrieved by an order of the Chief Conservation Officer can be appealed directly to an NEB appeal board. However, this process is not very accessible to

the general public because it is only open to companies and private landowners (*NEB Act* ss. 28.4[1] and 88[1]).

If NEB appeal is based on questions of law or jurisdiction, all stakeholders can apply to the Federal Court of Appeal for permission to appeal the decision (Canada NEB 2003). If the Federal Court of Appeal is satisfied that the NEB has:

- acted without, beyond or has refused to exercise its jurisdiction
- failed to observe a principle of natural justice or procedural fairness that it was required by law to observe
- erred in law in making a decision or an order, whether or not the error appears on the face of the record
- based its decision or order on an erroneous finding of fact which it has made in a perverse or capricious manner or without regard for the material before it
- acted or failed to act, by reason of fraud or perjured evidence or acted in any other way that was contrary to law

the Federal Court of Appeal may order the NEB to:

- do any act or thing it has failed or refused to do or has unreasonable delayed in doing
- declare the decision, order, act or proceeding invalid or unlawful, or quash, set aside or set aside and refer back for determination in accordance with such directions as it considers to be appropriate
- prohibit or restrain the decision, order, act or proceeding (*Federal Courts Act* 1985, s.18.1)

The criteria used to determine which option would be chosen are not explicit, but previous decisions do establish precedents. Applications to the Federal Court of Appeal must be made within 30 days after the release of the NEB decision or order sought to be appealed (*Federal Courts Act* 1985, s. 18.1[2]; *National Energy Board Act* 1985, s. 22[1]).

There are no direct appeal provisions within the *CEA Act*, IFA, *MVRMA* or Deh Cho IMA. However, broader disputes associated with the interpretation or application of the Inuvialuit, Gwich'in, or Sahtu Dene and Metis Comprehensive Land Claim Agreements can be resolved through the Inuvialuit Arbitration Board, the Gwich'in Arbitration Panel and the Sahtu Arbitration Panel, respectively (GNWT 2005d). However, these arbitration processes are intended for governments, not for other stakeholders.

In summary, legal and jurisdictional aspects of governmental decisions or orders can be challenged through the Federal Court and the Federal Court of Appeal. This appeal process is mainly limited to questions of law to minimize delays to the decision-making process. However, there are two minor deficiencies associated with the appeal process:

- the court appeals outlined in the *National Energy Board Act* (1985) and *Federal Courts Act* (1985) can be costly, lengthy and based on unclear decision-making criteria
- the option of appealing directly to the NEB appeal board is only available to companies and private landowners

The appeal process that is in place meets the basic evaluative criteria but two minor deficiencies exist. Accordingly this principle is largely met

6.2.12 Compliance Monitored and Enforced

Compliance monitoring programs help ensure adherence to terms and conditions of project approval.

Evaluative Criteria

- Regulatory framework clearly outlines how adherence to terms and conditions of regulatory approval will be monitored and enforced
- Penalties for non-compliance are clear
- Outcomes of compliance monitoring and enforcement programs are communicated to stakeholders

Both the *CEA Act* and *MVRMA* allow for, but do not require, development of follow-up programs. Section 16(2) of the *CEA Act* states every comprehensive study of a project and every mediation or assessment by a review panel shall include a consideration of the need for, and the requirements of, any follow-up program in respect of the project. Section 117(3)(c) of the *MVRMA* states that the environmental impact review of a proposal for a development shall include consideration for the need for any follow-up program and the requirements of such a program. However, follow-up programs as defined by the *CEA Act* and *MVRMA* emphasize effects monitoring programs and do not discuss compliance monitoring specifically (see section 6.2.13). The ToR (2004) for the EIS of the MGP suggests that despite this narrow definition compliance monitoring programs can still be required.

The ToR (2004) requires proponents to describe the activities, procedures and programs that will be undertaken to confirm the implementation of approved design standards, mitigations, conditions of approval and company commitments, including proposed mitigation activities. The proponents are required to describe how compliance monitoring programs will function, who will be responsible for implementation and how reporting will take place. The proponents must identify relevant regulatory requirements as well as corporate management plans, programs, policies and quality assurance/ quality control measures (ToR 2004, 65).

Jurisdiction for enforcing compliance with terms and conditions of regulatory approval typically lies with individual regulatory agencies responsible for issuing licences and permits. The NEB is arguably the agency with the most enforcement power because the NEB can, with the approval of the Governor in Council, revoke or suspend a company's certificate for public convenience and necessity if it finds non-compliance with terms and conditions of regulatory approval (Canada NEB 2003).

NEB inspection officers audit and inspect proponent's construction activities, operation procedures, and routine maintenance and monitoring procedures (Canada NEB 2003). If

a condition of regulatory approval is not followed, inspection officers can resolve the problem by:

- talking with the company
- requesting an Assurance of Voluntary Compliance (AVC), which is a written commitment from the company that the non-compliance problem will be corrected within a given period of time
- issuing an Order to the company or any person(s) involved with the pipeline either to stop work or take specific actions (Canada NEB 2003, 55)

The action taken to enforce approval conditions is dependent upon the degree to which the violation may adversely affect the safety of the public or the environment (Canada NEB 2003). The NEB does not provide clear criteria for how an officer would determine which action to take to resolve a particular violation. There is also no requirement to communicate the violation to stakeholders.

In summary, compliance monitoring and enforcement provisions contain the following strengths:

- methods for monitoring and enforcing adherence to terms and conditions of regulatory approval are outlined through the NEB and the ToR
- the types of actions that can be taken by the NEB to enforce approval conditions are clear
- the ToR requires proponents to communicate outcomes of monitoring programs to stakeholders

Despite these strengths, two major deficiencies remain:

- the NEB does not provide clear criteria for how the action taken to enforce approval conditions is determined
- the NEB does not communicate violations to stakeholders

Additionally, a minor deficiency is that the *CEA Act* and *MVRMA* do not always require compliance monitoring and enforcement programs be developed and do not specify what the terms and conditions of such programs should be. Accordingly, this principle is only partially met.

6.2.13 Continuous Learning and Adaptive Management

Continuous learning and adaptive management facilitate on-going assessment of project impacts and enable proponents and regulators to continue to address relevant issues and make improvements where necessary.

Evaluative Criteria

- Key environmental and socio-economic indicators monitored throughout lifespan of project
- Stakeholders involved in design and implementation of effects monitoring programs
- Information gained from monitoring programs is communicated to stakeholders
- Information gained from monitoring programs is incorporated into adaptive management of the project
- Funding for monitoring programs is outlined

Both the *MVRMA* and the *CEA Act* allow for, but do not require, development of follow-up programs. Follow-up programs are defined in the *CEA Act* as programs for verifying the accuracy of the environmental assessment of a project and determining the effectiveness of any measures taken to mitigate the adverse environmental effects of the project. Follow-up programs are defined in the *MVRMA* as programs for evaluating the soundness of an environmental assessment or environmental impact review of a proposal for a development and programs for evaluating the effectiveness of mitigation measures imposed as conditions of project approval.

Through the ToR (2004), the proponents are required to identify and describe proposed environmental and socio-economic monitoring and follow-up programs. Monitoring

programs are implemented in order to "track conditions or issues during the project lifespan or at certain times" and follow-up programs are used to "verify the accuracy of impact predictions and determine the effectiveness of mitigative measures" (ToR 2004, 65-66). The ToR (2004) emphasizes that monitoring and follow-up programs are supposed to identify or measure how the MGP advances objectives of sustainability and maximizes beneficial impacts in the project area.

The proponents must describe the selection process for key issues, subjects or indicators used in monitoring and follow-up programs; explain how the programs will function; clarify implementation responsibilities; and describe the process for communicating results back to communities. The proponents are also responsible for identifying communities, agencies, boards and regulators involved in preparation of these programs. The proponents must highlight opportunities for partnerships, explain how their programs will be coordinated with other monitoring and follow-up programs, and describe how holders of traditional knowledge and area residents will participate in the programs. The proponents must also explain how these programs will be funded (ToR 2004).

Section 38(5) of the *CEA Act* states that the results of follow-up programs may be used for implementing adaptive management measures or for improving the quality of future environmental assessments. Accordingly, the ToR (2004) requires proponents to describe how the results of the programs will be used to refine or modify the design and implementation of management plans, mitigation measures and project operations.

In addition to these project-specific measures, the *MVRMA* provides for broader environmental monitoring and audit programs. Section 148 of the *MVRMA* states that the federal Ministers shall have an environmental audit conducted at least once every five years by an independent person or body. Environmental audits must include:

- an evaluation of information collected or analyzed in order to determine trends in environmental quality, potential contributing factors to changes in the environment and the significance of those trends

- a review of the effectiveness of the regulation of uses of land and water and deposits of waste on the protection of the key components of the environment from significant adverse impact
- a review of the response to any recommendations of previous environmental audits

Environmental audit reports are submitted to the federal Minister and made available to the public (MVRMA, s. 148[4]). Responsibility for conducting environmental audits lies with the NWT Cumulative Impact Monitoring Program (Canada DIAND 2003), which is described in further detail in section 6.2.10.

In summary, the continuous learning and adaptive management strategies outlined in the regulatory review and approval framework contain the following strengths:

- proponents must monitor key environmental and socio-economic indicators throughout the lifespan of the project
- proponents must involve holders of traditional knowledge and area residents in the design and implementation of monitoring and follow-up programs
- proponents must detail how results of monitoring and follow-up programs will be incorporated into adaptive management of the project
- proponents must describe how outcomes of monitoring and follow-up programs will be communicated to stakeholders
- broader environmental audits are conducted every five years and the results of these audits are communicated to stakeholders
- proponents must outline out monitoring and follow-up programs will be funded

The continuous learning and adaptive management strategies outlined in the regulatory review and approval framework meet all the basic requirements of this principle. A minor deficiency is that the *CEA Act* and *MVRMA* do not always require development of such programs. Accordingly, this principle is largely met.

6.3 Summary

There are a number of strengths to the regulatory review and approval process for the MGP. Best practice principles for cumulative effects assessments and clear roles and responsibilities are fully met. The legislated, appeal process, and continuous learning and adaptive management principles are met with only minor deficiencies.

However, there are also a number of weaknesses to the process. The process does not meet best practice principles for transparency, and there were one or two major deficiencies for each of the remaining seven best practice principles. Table 6.1 highlights the key strengths and weaknesses associated with methods of incorporating each principle.

Table 6.1 Evaluation Results

Best Practice Criteria	**Rating**	**Strengths**	**Major Deficiencies**
1. Legislated	Largely met	• Central components established in law	• No major deficiencies identified
2. Clear Roles and Responsibilities	Fully met	• Authority and responsibility clearly outlined in administrative structures and policy • Jurisdictional overlap is addressed	• No deficiencies identified
3. Rationale Assessed	Partially met	• Proponents required to examine need for, purpose of and alternative means of carrying out the MGP	• No requirement to incorporate rationale assessment outcomes into project decisions • Rationale assessment does not include comprehensive evaluation of competing projects
4. Participative	Partially met	• Variety of interests represented on JRP • Stakeholders involved in key stages • Funding made available for participation • Project information available in necessary languages and formats	• No requirement to incorporate stakeholder values into final decision • Process is not collaborative, it is based on a quasi-judicial hearing process
5. Distributional Equity Required	Partially met	• Inuvialuit, Gwich'in, Sahtu and Deh Cho have a legal right to compensation • IFA and Deh Cho IMA require maximization of local benefits • ToR makes several references to the importance of distributional equity	• *MVRMA* does not contain provisions for maximizing local benefits • Process for negotiating supra-regulatory agreements raises equity questions
6. Adapted to Context	Partially met	• Legal and fiduciary obligations to Inuvialuit, Gwich'in, Sahtu and Deh Cho are fully met • The *Guidelines* and other agreements such as the *Cooperation Plan* and *Plan for Public*	• Legal and fiduciary responsibilities to Dene Tha' not met • Barriers to effective incorporation of traditional knowledge still exist

		Involvement increase the likelihood that traditional and local knowledge will be incorporated	
7. Adequate Information	Partially met	• Adequate information defined and required • Information communicated to the public • Guidelines for incorporating traditional knowledge	• Majority of information is provided by the proponents, not an objective party
8. Transparent Decisions	Not met	• Roles of parties involved are explicit and clear • Government must publish response to each of the JRP recommendations	• No clear criteria for how recommendations in JRP report are evaluated by government • Final NEB approval decision is based on "public interest", a vague and undefined term that gives NEB a lot of discretion • No clear criteria for how government decides whether to approve an NEB decision to issue a certificate
9. Efficient	Partially met	• Scoping provisions are provided • Decision-making framework is in place	• Timelines were too ambitious and have been exceeded • The Dene Tha' were unjustifiably excluded from scoping the regulatory review and approval process and a major delay has resulted
10. Cumulative Effects Assessed	Fully met	• Completed and linked to broader goals and objectives	• No deficiencies identified
11. Appeal Process	Largely met	• Questions of law can be appealed through Federal Court and Federal Court of Appeal	• No major deficiencies identified
12. Compliance Monitored and Enforced	Partially met	• Methods for monitoring and enforcing adherence to terms and conditions of regulatory approval are outlined through the NEB and the ToR • The types of actions that can be taken by the NEB to enforce approval conditions are clear • The ToR requires proponents to communicate	• The NEB does not provide clear criteria for how action taken to enforce approval conditions is determined • The NEB does not communicate violations to stakeholders

		outcomes of monitoring programs to stakeholders	
13. Continuous Learning and Adaptive Management	Largely met	• Key environmental and socio-economic indicators monitored throughout the lifespan of the project • Results of monitoring and follow-up programs incorporated into adaptive management of the project and communicated to stakeholders • Environmental audits conducted every five years • Funding sources outlined	• No major deficiencies identified

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

Oil and gas production in Canada is expected to increase in the next few decades to meet growing demand in the United States and Asia Pacific region (Van Hinte et al. 2007). As discussed in chapter four of this report, major oil and gas projects such as the MGP have enormous potential for both positive and negative impacts. Effective regulatory review and approval processes are needed to ensure that potential impacts are accurately identified, assessed and evaluated before such projects are approved.

Evaluation of regulatory review and approval processes is an important field of research. This study helps fill a research need by identifying best practice principles for regulatory review and approval processes, and evaluating which of the principles are incorporated into the regulatory review and approval process for the MGP. Lessons learned can be used to improve the assessment process for major projects.

This chapter reviews the best practice principles developed in chapter two of this report and summarizes the findings from the evaluation completed in chapter six. Recommendations for improving the practice and theory of regulatory review and approval processes are provided.

7.2 Best Practices for Regulatory Review and Approval Processes

This report describes 13 best practice principles that outline basic administrative requirements and public engagement processes necessary for an effective regulatory review and approval process. These principles and evaluative criteria were developed following a literature review of best practice principles for environmental assessment.

The principles and evaluative criteria were tailored to evaluate the regulatory review and approval process for a pipeline project in northern Canada.

7.3 Evaluation of the Regulatory Review and Approval Process for the Mackenzie Gas Project

The regulatory review and approval process for the MGP fully meets two of the 13 best practice principles, largely meets three, partially meets seven and does not meet one. Clearly, the regulatory review and approval process for the MGP contains a number of strengths and weaknesses. Many of the strengths are directly linked to the innovative programs and agreements that arose from the need to coordinate the Aboriginal, federal and territorial agencies with regulatory review and approval responsibilities. Of particular note are agreements used to clarify roles and responsibilities and methods used to assess cumulative effects.

A number of measures were taken to clarify roles and responsibilities of agencies involved in the regulatory review and approval process for the MGP. The *Cooperation Plan* (2002) created a preliminary strategy for a coordinated regulatory review and approval process, and was developed before the proponents submitted the Preliminary Information Package (2003). The *Consolidated Information Requirements* (2002) guided potential pipeline proponents through the process of collecting and analyzing baseline information needed to prepare an EIS and other regulatory applications. The *Coordination Agreement* (2004) was developed after the proponents submitted the Preliminary Information Package (2003) and clarifies the roles and responsibilities of the agencies involved in the regulatory review and approval process for the MGP.

Cumulative effects assessments are linked to the NWT Cumulative Effects Assessment and Management Strategy and Framework and the NWT Cumulative Impact Monitoring Program. Both programs examine cumulative impacts to social, cultural, economic, biological and physical environments (Canada DIAND 2003). This enhances the cumulative effects assessment of the MGP by providing more specific guidelines than those contained in the *CEA Act* and *MVRMA*. The programs ensure broader goals and

objectives are considered and ensure both traditional knowledge and science are incorporated into cumulative effects assessments.

Despite these strengths, the regulatory review and approval process for the MGP still contains weaknesses. A number of these weaknesses, such as the lack of clear enforcement or offence provisions and the lack of objective information, are also recurrent shortcomings in the federal environmental assessment process (Boyd 2003).

A number of other deficiencies are the direct result of vague wording and discretionary application of legislation. For example, although rationale assessments must be completed, there is no requirement to incorporate the outcomes of such assessments into final decisions. Likewise, stakeholder interests must be considered, but there is no requirement to incorporate stakeholder values into final decisions.

Although a number of the principles are not fully met, the regulatory review and approval process for the MGP has made several improvements upon processes that have been used in the NWT in the past and upon processes that are currently used in many other jurisdictions across Canada. A number of these improvements are the result of comprehensive land claim agreements, which clearly outline rights and title for the Inuvialuit, Gwich'in and Sahtu, and have resulted in a number of positive changes. For example, guidelines for the adequate incorporation of traditional knowledge now exist, and the Inuvialuit, Gwich'in, Sahtu and Deh Cho now have a legal right to compensation for negative impacts incurred through resource development projects.

The comprehensive land claim agreements and Deh Cho IMA have increased Aboriginal involvement in decision-making by enabling the Inuvialuit, Gwich'in, Sahtu and Deh Cho to nominate five of the seven members of the JRP. The JRP sought stakeholder participation in the review process through involvement in developing the ToR, reviewing the adequacy of the EIS and participating in the public hearing process. The JRP also required Aboriginal language interpretation services at hearings (JRP 2005b).

Finally, the comprehensive land claim agreements led to the establishment of the Mackenzie Valley Land and Water Board, the Mackenzie Valley Environmental Impact Review Board and the Inuvialuit Game Council. All of these boards were involved in the MoA for the establishment of the Northern Gas Project Secretariat (NGPS) (MoA for NGPS 2003). The NGPS has clearly improved the dissemination of information to the public through its logistical, communications, information management, administrative and technical support responsibilities.

7.4 Recommendations to Improve Practice

To be effective at identifying, analysing and predicting project impacts, and to increase stakeholder acceptability, the regulatory review and approval process for major projects should incorporate all 13 best practice principles outlined in this report. This section provides recommendations for increasing incorporation of best practice principles. These recommendations have emerged after examination of key strengths and deficiencies of the regulatory review and approval process for the MGP.

7.4.1 Comprehensive Land Claims

A number of the strengths in the regulatory review and approval process for the MGP are the direct result of comprehensive land claim agreements. Therefore, a logical recommendation is that comprehensive land claim agreements and/or self-government agreements be settled in areas with outstanding land claims. This report shows that such agreements lead to the establishment of programs and institutions necessary for effective Aboriginal participation in decision-making. Comprehensive land claim agreements also clarify Aboriginal rights and title. However, the process of negotiating comprehensive land claims can take many years. Given the length of the process, interim measures agreements should be developed in all areas with outstanding land claims to determine how regulatory review and approval processes will be approached while comprehensive land claim negotiations are in process. The Deh Cho IMA shows that this can be an affective strategy for increasing Aboriginal involvement in decision-making.

7.4.2 Legislation

Central components of the regulatory review and approval process should be established in law. While this is basically true of the regulatory review and approval process for the MGP, additional improvements can be made. Specific aspects of how and when the process is implemented need to be clarified. For example, provisions for effective public involvement should be legislated. Decision-making criteria should be clarified. The *CEA Act* and *MVRMA* should require continuous learning and adaptive management for all environmental assessments.

7.4.3 Roles and Responsibilities

The regulatory review and approval process for the MGP shows that it is possible to clarify roles and responsibilities even when multiple agencies have overlapping jurisdiction. Developing preliminary agreements before the process is officially triggered, such as the *Cooperation Plan* (2003) and the Consolidated Information Requirements (2002) can help identify levels of authority and responsibility and makes the process clearer for governments, proponents and participants in the process.

7.4.4 Rationale Assessments

Ideally, objective parties should complete rationale assessments. If proponents complete rationale assessments, procedures for generating them should be provided in the ToR and should be transparent, systematic and explicit. Broader evaluation of whether or not the project maximizes public interest when compared with other proposed or potential projects should be completed. For example, if an individual project creates significant adverse impact it should be compared with alternative economic development proposals that have equal or greater benefits, have fewer adverse impacts and still fulfil the original purpose of the project (Nikiforuk 1997). Provisions for this type of comprehensive rationale assessment should be in place in regulatory review and approval processes in Canada. Outcomes of rationale assessments should be a fundamental factor in the decision-making process.

7.4.5 Stakeholder Participation

A number of strategies to increase stakeholder involvement can be taken from the regulatory review and approval process for the MGP. For example, a review panel that represents of a variety of stakeholder interests is more likely to identify and assess issues that are important to stakeholders than is a panel that is appointed solely for their technical expertise. Stakeholders should be involved in scoping the issues that will be included in the regulatory review and approval process, in assessing whether the EIS adequately meets the requirements of the ToR and in the technical and public hearing process. Information relevant to the regulatory review and approval process needs to be disseminated to stakeholders in necessary languages and formats. Adequate funding for stakeholder participation should be provided and procedures for allocating funding should be transparent, especially if funding requests exceed the amount available. Establishing an organization, such as the Northern Gas Project Secretariat, to coordinate logistical, communications, information management, administrative and technical support functions for the regulatory review and approval process is one way of improving dissemination of information and increasing stakeholder engagement in the process. Stakeholder involvement can be further increased by adoption of a collaborative decision-making process. For example, a consensus-based mediated solution could be developed by all stakeholders. The *CEA Act* contains provisions for mediated environmental assessments but these have never been used (Boyd 2003).

7.4.6 Distributional Equity

Legislated requirements for compensation and maximization of benefits can help ensure distributional equity. The Inuvialuit, Gwich'in, Sahtu and Deh Cho have some legal rights to compensation through a variety of supra-regulatory agreements. The Inuvialuit and Deh Cho also have a legal right to maximization of local benefits but this provision is not included in the *MVRMA*. A number of concerns about the equity of supra-regulatory agreements have been raised by both Aboriginal communities and by project proponents. In addition, because the provisions of these agreements are often confidential, there is no public oversight to ensure distributional equity. Thus, supra-regulatory agreements are

not considered an ideal method of achieving distributional equity. Distributional equity needs to be a required condition of regulatory approval if it is to be fully realized. This may require explicitly prescribing the form and substance of equity agreements in legislation.

7.4.7 Adaptation to Context

The rights and title of the Inuvialuit, Gwich'in, Sahtu and Deh Cho are clearly outlined through the IFA, GCLCA, SCLCA and Deh Cho IMA, respectively. A number of agreements are in place to ensure the regulatory review and approval process for the MGP adheres to terms and conditions of land claim agreements. It is recommended that similar agreements be developed for regulatory review and approval processes for other projects that affect more than one jurisdiction.

The Crown's duty to consult and accommodate Aboriginal people is clearly described in the *Constitution Act, 1982* and through case law. Despite this, the Dene Tha' were not properly consulted at the beginning of the regulatory review and approval process for the MGP. Care must be taken to ensure that consultation activities extend beyond provincial or territorial boundaries and to accurately identify all Aboriginal people with rights and title in the project area.

Efforts were made to incorporate traditional and local knowledge into the regulatory review and approval process for the MGP. The *Guidelines for Incorporating Traditional Knowledge in Environmental Impact Assessment* (2005), the *Cooperation Plan* (2002) and the *Plan for Public Involvement* (2003) identify strategies for when, where and how to incorporate local and traditional knowledge. Such strategies improve the likelihood that traditional knowledge will be incorporated and should be adopted in other jurisdictions. However, some significant barriers to effective incorporation of traditional knowledge remain. For example, the EIS is the primary vehicle for incorporating local and traditional knowledge. This is problematic because the project proponents, with whom elders or holders of traditional knowledge may not feel comfortable sharing knowledge, prepare the EIS.

7.4.8 Adequate Information

As mentioned previously, the *Guidelines for Incorporating Traditional Knowledge in Environmental Impact Assessment* (2005) and the Northern Gas Project Secretariat help ensure that adequate information is gathered and disseminated. It is recommended that agencies with mandates similar to that of the Northern Gas Project Secretariat be established for regulatory review and approval processes for other major projects.

There is a lack of baseline data in northern Canada and this puts a substantial dependence on project-driven studies that are conducted by project proponents. In order to ensure that adequate information is available, it is recommended that objective parties gather a database of baseline scientific, technical, traditional and local information. For example, the government could hire an independent agency to collect and analyse project-related information. which would reduce dependence on proponent-driven studies.

7.4.9 Transparent Decisions

The decision-making process for the MGP has a number of steps and, although the process is complex, the roles of parties involved are clear. As will be done with the final JRP report, it is important that the government publish a response to each of the JRP recommendations as this increases transparency of the process.

Three aspects of decision-making for the regulatory review and approval process for the MGP remain vague and need to be clarified. Clear criteria need to be provided for how the government evaluates JRP recommendations, for how the NEB determines if a project is in the public interest, and for how the government decides whether to approve an NEB decision to issue a certificate. This recommendation can be extended to all regulatory review and approval processes in Canada that include review panels and involve the NEB.

7.4.10 Efficiency

The regulatory review and approval process for the MGP illustrates that even if a number of boards and agencies have overlapping jurisdiction, the process will not necessary become plagued by unnecessary inconsistencies, uncertainties and delays. Clarifying roles and responsibilities, ensuring scoping provisions are provided and putting a clear decision-making framework in place can create a more efficient regulatory review and approval process. It is important that stated timelines are realistic and that regulatory review and approval processes are scoped to meet all legal requirements. Failure to meet legal and fiduciary responsibilities to the Dene Tha' has resulted in an indefinite delay to the decision-making process.

7.4.11 Cumulative Effects

Given the nature of cumulative effects assessments, assessments for individual projects should be linked to regional cumulative effects monitoring programs and frameworks. It is recommended that programs similar to the NWT Cumulative Effects Assessment and Management Strategy and Framework and the NWT Cumulative Impact Monitoring Program, which require assessment and management of cumulative effects within the NWT, be adopted in other jurisdictions.

7.4.12 Appeal Process

Stakeholders can challenge questions of law through the Federal Court and Federal Court of Appeal. Some NEB decisions can be appealed directly to the NEB, but only private landowners and companies can get standing for these appeals. There are no provisions for appeal tribunals in the *CEA Act*, IFA, *MVRMA* or Deh Cho IMA. Federal Court of Appeal and Federal Court appeal processes can be costly and lengthy. Appeal tribunal provisions, such as those available through the NEB, may make the appeal process more accessible. Appeal tribunal procedures should be available to all stakeholders, not just private landowners and companies.

7.4.13 Compliance Monitoring and Enforcement

The ToR (2004) requires proponents to communicate outcomes of compliance monitoring programs to stakeholders, a requirement that should be incorporated into other regulatory review and approval processes. The NEB should ensure that a company's adherence to terms and conditions of regulatory approval is reported to stakeholders, and clear criteria for determining actions taken to enforce approval conditions are communicated to stakeholders.

7.4.14 Continuous Learning and Adaptive Management

The regulatory review and approval process for the MGP requires the proponents to describe how key environmental and socio-economic indicators will be monitored throughout the lifespan of the project. The results of these programs have to be incorporated into project operations and communicated back to stakeholders. Additionally, the NWT Cumulative Impact Monitoring Program conducts a regional environmental audit every five years. Programs such as these encourage continuous learning about the effects of the project and facilitate adaptive management. Similar programs should be a requirement of all regulatory review and approval processes. Currently, development of follow-up programs is not mandatory under the *CEA Act* and *MVRMA*, requirements for such programs are determined on a project-by-project basis.

7.5 Limitations of Research

This research project is based on a review of primary and secondary literature. The intent of this study was to establish best practice principles for regulatory review and approval processes and determine which of these principles were incorporated into the regulatory review and approval process for the MGP. As such, the focus of the research has been on evaluating a policy framework. The views and opinions of stakeholders involved in the process have not been analysed, and it should be recognized that stakeholder perspective(s) on the effectiveness of this framework may differ.

The evaluation system in this project is also very coarse. Each principle was evaluated using a system with only four different rating options: fully met, largely met, partially met and not met. The coarseness of this rating system oversimplifies certain aspects of the evaluation. For example, some decisions in the regulatory review and approval process for the MGP are clear and traceable but these overshadowed by the lack of clear decision-making criteria. Undoubtedly, each principle in this study could be evaluated with its own set of best practice criteria. The coarse rating system used in this study enables an overview of the regulatory review and approval process as a whole, while still allowing specific strengths and deficiencies to be highlighted.

Finally, the regulatory review and approval process for the MGP is still in progress. The majority of this evaluation is based on a framework that is already in place but certain aspects of the evaluation, such as incorporation of the efficiency principle, may change between the time this report is published and completion of the review and approval process.

7.6 Recommendations for Future Research

An evaluation of stakeholder perceptions of the regulatory review and approval process for the MGP would greatly enhance the results of this study. A comparison of stakeholder perceptions and the results of this study could identify which aspects of the policy need to be strengthened or approached in a different manner. An examination of stakeholder perceptions of the process could also identify areas of disconnect between the policy framework and actual implementation of the process.

It would also be valuable to do a follow-up study to examine which of the JRP recommendations are adopted, how the decision-making process is communicated and how compliance monitoring and enforcement programs as well as continuous learning and adaptive management programs are implemented. Similarly, a study such as this would also be greatly enhanced if stakeholder perceptions were analysed.

Finally, this study can provide a baseline for comparison with other regulatory review and approval processes. Therefore, it is recommended that other regulatory review and approval processes are evaluated using a similar evaluation system and a comprehensive cross-comparison is eventually undertaken.

7.7 Final Remarks

The regulatory review and approval process in Canada is constantly evolving. Greater legislative recognition of Aboriginal rights and title, increasing public concern over cumulative impacts and growing understanding of the importance of local involvement in decision-making are driving some of these changes. In 1988 Thomas Berger wrote:

> It is in the North that the survival of the native subsistence economy is essential; it is there that the place of native peoples within our political system will be determined; it is there that our commitment to environmental goals and international co-operation will be tested. In the North lies the future of Canada (p. 13).

In many ways Berger was right. And, in many ways, the future of the North is as uncertain as it was in 1988. However, lasting positive change does not happen instantly and, as illustrated throughout this report, the political tools necessary for building a more sustainable future are slowly being acquired. It is the responsibility of all of us to ensure that they are put to use.

APPENDICES

Appendix A Funding Allocations for Review of Draft ToR

Applicant	Funded to Comment on Draft TOR in order to:	Total Approved
Tulita Yamouria Community Secretariat	ensure that impacts to land of the community of Tulita, hamlet and lifestyles are minimized.	$16,000
Gwich'in Tribal Council	outline how the project will directly have an impact on the cultural and economic relationship between the Gwich'in people and the land.	$10,986
Steven Baryluk	ensure concerns of each community within the Inuvialuit Settlement Region are addressed.	$2,370
The Town of Hay River	ensure that there will not be any adverse effects from the project upon the Town, its citizens, and its businesses.	$5,000
Deh Cho First Nations	ensure the interests of the Deh Cho communities are considered.	$17,300
Sierra Club of Canada	provide suggested revisions focusing on the scope of project, permafrost, and climate change.	$5,084
Dene Youth Alliance	provide suggested revisions focusing on Traditional Knowledge, and precautionary approach.	$7,400
Sambaa K'e Dene Band	Focus on draft TOR's Traditional Knowledge study, which was recently conducted in relation to the MGP.	$7,050
Canadian Arctic Resources Committee	comment on the adequacy of the draft TOR with respect to cumulative effects assessment requirements and policy.	$5,000
NWT Literacy Council	The coalition of the four groups the applicant is representing intends to review the draft TOR to ensure that the JRP considers the full range of possible social impacts of the MGP.	$6,900
Canadian Nature Federation	provide suggested revisions focusing on: value ecosystem components; biodiversity and species at risk; landscape-scale approach; impacts on protected areas and biodiversity hot spots; protected area networks establishment; and construction impact on fish habitats.	$5,000
NWT Chamber of Commerce	comment on the draft TOR in consultation with chamber members throughout the NWT.	$3,000
Deh Gah Got'ie Dene Council	ensure concerns of potential environmental and socio-economic impacts on the community are addressed.	$6,300
Ecology North – CPAWS	comment of the draft TOR's conformity with the mission, vision, mandate and operating objectives of CPAWS and Ecology North.	$5,475
Status of Women Council of the NWT	ensure that the lives of women, children and socio-cultural systems are given equal balance of attention, evaluation, and monitoring.	$10,000
Aklavik Indian Band	ensure concerns of potential environmental and socio-economic impacts on the community are addressed.	$3,650
	Total	**$116,515**

Source: CEAA 2004a

Appendix B: Funding Allocations for Review of EIS

Applicant	Total Approved
Canadian Arctic Resources Committee, World Wildlife Fund Canada, Sierra Club of Canada	$15,000
Deh Cho Business Development Centre	$10,000
Deh Cho First Nations	$65,000
Dene Nation	$15,000
Dene Tha' First Nation	$15,000
Dene Youth Alliance	$6,000
Ecology North	$10,000
Ernie MacDonald Land Corporation	$15,000
Gwich'in Renewable Resource Board	$25,000
Gwich'in Tribal Council	$25,000
Tulita Yamouria Community Secretariat	$30,000
Inuvialuit Regional Corporation	$35,000
Joint Secretariat (Inuvialuit)	$35,000
Kahsho Got'ine Dene Community Council	$28,000
Nature Canada	$12,000
NWT Literacy Council & Alternatives North	$16,500
Randal Boogie Pokiak	$5,000
Status of Women Council of the NWT	$12,500
Town of Hay River	$5,000
Total	**$380,000**

Source: CEAA 2004

Appendix C: Allocations for Participation in Public Hearings

Applicant	Total Approved
Inuvialuit Regional Corporation	$60,000
Joint Secretariat	$161,000
Fisheries Joint Management Committee	$90,000
Randal Boogie Pokiak	$14,781
Gwich'in Tribal Council	$113,000
Gwich'in Renewable Resource Board	$66,703
Nihtat Gwich'in Council / Inuvik Native Band	$37,350
Ayoni Keh Land Corporation	$16,000
K'ahsho Got'ine District Land Corporation	$112,500
Tulita Yamouria Community Secretariat	$57,000
Deline Land Corporation	$56,000
Dene Tha' First Nation	$61,500
North Slave Métis Alliance	$25,300
West Point First Nation	$49,150
Acho Dene Koe	$49,150
Pehdzeh Ki First Nation	$84,650
Deh Gah Gotie Dene Council	$49,150
Liidlii Kue First Nation	$47,325
Fort Simpson Métis Nation	$47,325
Katlodeeche First Nation	$27,000
Sambaa K'e Dene Band	$29,580
Fort Providence Métis Council	$27,000
Town of Inuvik	$6,000
Town of Hay River	$9,000
City of Yellowknife	$7,000
Village of Fort Simpson	$13,702
Enterprise Settlement Corporation	$7,000
Hamlet of Fort McPherson	$14,000
Canadian Arctic Resources Committee	$11,988
Canadian Arctic Resources Committee Coordinating Committee for MGP	$50,000
Arctic Indigenous Youth Alliance	$54,500
Alternatives North Coalition	$105,000
Nature Canada	$21,500
World Wildlife Fund	$20,400
Sierra Club of Canada	$68,500
Total	**$1,670,054**

Source: CEAA, 2006

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